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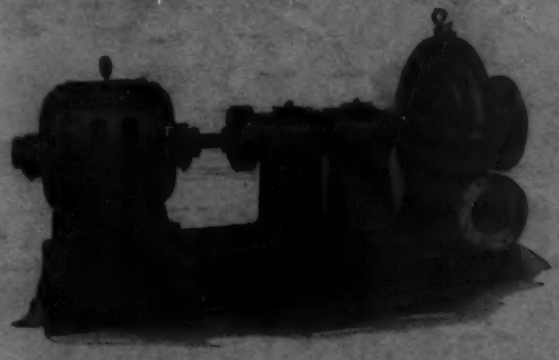

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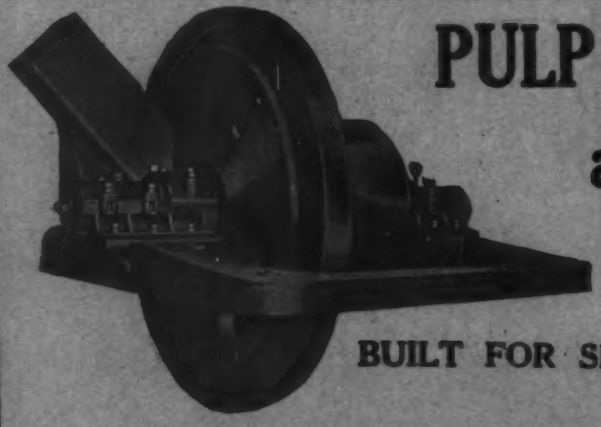

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PAPER TRADE JOURNAL
ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD
FIFTY-SECOND YEAR
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PAPER TRADE JOURNAL

Vol. LXXVIII No. 7 NEW YORK AND CHICAGO Thursday, February 14, 1924

PAPER MEN MEET WITH GOVERNMENT OFFICIALS

Advisory Committee of Pulp and Paper Industry Hold Interesting Conference at Washington Followed by Luncheon—Important Papers on Various Problems Read, the Later Discussion of Them Being Equally Instructive—George W. Sisson, Jr., Expresses Gratification at the Department of Agriculture's Recognition of The Industry—Secretary Wallace Speaks.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., February 13, 1924.—"The paper industry of the United States is pleased to recognize and to express its gratification at the fine spirit of co-operation shown by the Department of Agriculture in its willingness to assist and to work with a great national industry," said George W. Sisson, Jr., president of the Racquette River Company, Potsdam, N. Y., addressing the Advisory Committee of the Pulp and Paper Industry for the Department of Agriculture at a conference held here last Thursday attended by the committee and various government officials, including the Secretary of Agriculture and the Secretary of Commerce.

The committee spent a full day here during the course of which various government officials spoke and the paper men replied. In addition the committee was received by President Coolidge, following which a luncheon was held at the Cosmos Club, at which Secretary of Commerce Hoover was present and spoke.

The Day's Program

The day's program was as follows:

"The Paper Industry and Forest Policy," Henry C. Wallace, Secretary of Agriculture.

"Co-operation Between the Industry and the Department of Agriculture," George W. Sisson, Jr., President of the Racquette River Paper Company.

"Future Development of the Paper Industry," Norman W. Wilson, Hammermill Paper Company.

The Department's Program of Investigations in Pulpwood Growing and in Pulp and Paper:

1. Forest Investigations in the Northeast.—Samuel T. Dana, Director of the Northeast Forest Experiment Station.

2. Forest Investigations in the Lake States.—Raphael Zon, Director of the Lake States Forest Experiment Station.

3. Pulp and Paper Investigations at the Forest Products Laboratory.—Carlisle P. Winslow, Director of the Forest Products Laboratory.

4. Economics of Pulp and Paper.—Charles W. Boyce, in charge of Pulp and Paper Statistics, Forest Service.

Discussion

I and II—Led by George W. Ostrander, of Finch Pruyn & Co., and D. C. Everest, Marathon Paper Mills Company.

III.—Led by W. G. MacNaughton, Secretary Technical Association of Pulp and Paper Industry.

IV.—Hugh P. Baker, Executive Secretary, American Paper and Pulp Association.

Action by committee on program as presented and discussed.

Those in Attendance

The following members of the committee attended the conference: George W. Sisson, Jr., Racquette River Paper Company, Potsdam, N. Y.; Henry W. Stokes, York Haven Paper Company, Philadelphia, Pa.; Stanley C. Bayless, Bayless Manufacturing Corporation, Austin, Pa.; D. C. Everest, Marathon Paper Mills Company, Rothschild, Wis.; Norman W. Wilson, Hammermill Paper Company, Erie, Pa.; George N. Ostrander, Finch-Pruyn & Co., Glens Falls, N. Y.; Harry E. Fletcher, Fletcher Paper Company, Alpena, Mich.; Charles W. Luke, West Virginia Pulp and Paper Company, 200 Fifth avenue, New York City; A. C. Goodyear, Bogalusa Paper Company, Buffalo, N. Y.; Grellet Collins, Dill and Collins Company, 140 North Sixth street, Philadelphia, Pa.; M. E. Marcuse, Bedford Pulp and Paper Company, Richmond, Va.; I. J. Marcuse, Bedford Pulp and Paper Company, Richmond, Va.; Hugh P. Baker, American Paper and Pulp Association, New York City.

The foregoing with the following additional members and guests attended the luncheon at the Cosmos Club at 1 P. M.:

L. M. Alexander, Nekoosa-Edwards Paper Company, Port Edwards, Wis.; Charles A. Upson, The Upson Company, Lockport, N. Y.; Hon. Herbert Hoover, Secretary of Commerce, Washington, D. C.; Hon. Henry C. Wallace, Secretary of Agriculture, Washington, D. C.; Dr. George K. Burgess, Director of the Bureau of Standards, Washington, D. C.; Dr. Julius Klein, Director of the Bureau of Foreign and Domestic Commerce, Washington, D. C.; Col. W. B. Greeley, Chief Forest Service, Washington, D. C.; Raphael Zon, Forest Economist, U. S. Forest Service, Washington, D. C.; Earle H. Clapp, Assistant Forester in Charge of Research, Washington, D. C.; Carlisle P. Winslow, Director Forest Products Laboratory, Madison, Wis.; Ward Shepard, Assistant in Charge of Research, U. S. Forest Service, Washington, D. C.; S. T. Dana, Director Northeastern Forest Experiment Station, Amherst, Mass.; Charles W. Boyce, in charge of Paper and Pulp Statistics, U. S. Forest Service, Washington, D. C.; Col. DuB. Brookings, Chamber of Commerce of U. S.; W. G. MacNaughton, Secretary Technical Association Paper and Pulp Industry.

Mr. Sisson's Address

George W. Sisson, Jr., in his address on "Co-operation," said, in part:

Our paper industry comes in close relation to agriculture in that its principal raw material is fiber; fiber of many kinds it is true, but all ultimately productions of the soil. What a field for study is this of suitable fibers, economically produced and reproduced, easily harvested and transported for use, and lending themselves most readily to processes of refinement that fit them for weaving into a sheet of paper adapted for the various uses which our civilization demands. If any argument were needed to prove the

propriety of having the Forest Service of the United States within the Department of Agriculture as against any other governmental department, it might be found in the very fact that the great business of the Forest Service is the protection, management, utilization and reproduction of trees rooted in the soil; every tree a living, growing entity, in whose God-given synthesis has been built up the fiber, and other valuable materials which it is our privilege to utilize through scientific research and the practice of our art.

From this it will be apparent that the first and, perhaps, the greatest co-operative effort of the paper industry with the Department of Agriculture should be along forestry lines. The absolute dependence of the industry in the United States upon wood fibers, their rapid depletion in this country and the probable increasing difficulty of securing outside supplies makes this the major problem of the industry today. The paper industry stands ready to co-operate with the department in the adoption and the carrying out of a wise forestry policy intended to serve the needs of all our people.

Again, as owners of timberland, paper manufacturers are ready to co-operate with the forest service in such research and experimentation as will lead to definite knowledge of the best methods in the various localities to reach the desired result of adequate protection, economic management and assured reproduction.

The second great field for co-operative effort is in the line of utilization of our raw material, and this brings us directly to the splendid contribution to our industry that is being made by the Forest Products Laboratory. You will doubtless hear of the many projects which Director Winslow has in mind. None of these projects can be translated to the practical benefit of the industry without the sympathetic and intelligent co-operation of the mills. It is not likely that the full import of the wonderful results of the research work at the laboratory is realized by the industry. Any one of the several important problems for which they have found solution in recent years would more than warrant all that its support has cost. Recognition by the industry is due to these men of research whose painstaking work finds ultimate usefulness to the people only when adopted and put into practical commercial use in the arts and industries. Here lies our duty to the Forest Products Laboratory. First, a sympathetic and helpful attitude towards its work and every possible assistance in securing adequate financial support for it. Second, a readiness to apply in our mills the results of laboratory research and demonstrate their commercial possibilities. Third, to make our mills, so to speak, *extension laboratories* in which, under the guidance of the laboratory, we can assist in carrying on investigations, which being made under commercial conditions may have added value.

Interesting Discussions

D. C. Everest, of the Marathon Paper Mills Company, in discussing what the Lake States Forest Experiment Station can do for the pulp and paper industry of that region, said:

In discussing the value of the Lake States Forest Experiment Station to the pulp and paper manufacturers of that district, I am pleased to say that manufacturers within that district are deeply interested in the work and appreciate much the assistance which they feel will result from the study of the problems affecting the perpetuation of the industry.

For some time we have all felt that there was a great lack of information relative to present available supply of pulpwood resources. No effort has been made to improve conditions enabling increased growth on present timber lands, and until comparatively recent time no serious work has been done to substitute other species for the standard woods employed, namely, spruce, balsam and hemlock.

The question of improvement in yield of pulp per cord has been given some attention. The subject of protection against the action of insects and fungi has also been given considerable study, but the trouble still exists and great loss is sustained each year through these agencies.

The possibility of increasing the supply of spruce, balsam and tamarack within the swamp areas seems promising and is certainly necessary if papers of the present standards are to be maintained. The possibility of the perpetuation of hemlock growth seems to me less favorable than of any of the other species mentioned. The use of quick growing species such as jack pine and aspen and the utilization of hardwoods in the chemical process seems to be the salvation of the industry within the lake state. Work on this subject is now going on within the mills and the work of the Forest Products Laboratory at Madison has done more to assist and encourage this work than any other factor.

The mills must do more to conserve the timber after cutting. The introduction of the drum barker within the last few years has done more to save wood than any other single device. As against the use of knife barkers the drum barkers have saved at least 10 per cent of the wood to be barked at the mill. More can and will be done but no such percentage of saving can be expected.

What Problem Involved

The whole problem seems to involve first, the education of those financially interested in the present timbered and cut-over lands, to the necessity of a forest policy for the perpetuation of timber resources for their own benefit.

Second, the education of the public to such necessity, for its benefit.

In the Lake States our principal problem is fire protection and in co-operation with the experiment station and the State Conservation Commission, the newly organized Wisconsin Forest Protective Association hopes to really accomplish much along that line, and to a large extent through the financial assistance of its members. It is possible to practically eliminate fires in forest areas and there is no more reason for the continued destruction of timber resources than there is of continually increasing fire losses in the ordinary city or village.

Proper patrol system with adequate means of communication and equipment for suppression of fires, handled by trained men, who are interested in their work, will show immediate results and do more to promote the perpetuation of our timber resources than any other factor.

The problem of taxation is almost as important as fire protection. There are immense areas of land in the Lake States which if protected from fire will show a wonderful regrowth of timber in a comparatively short time and there is an increasing amount of cut-over lands being added to these areas each year, but unless some plan of deferred taxation is adopted private interests cannot afford to hold these lands, particularly in view of the fact that in one taxing district of several counties, it is admitted that cut-over lands are assessed at 134 per cent of their real value, timbered lands 87 per cent and farming lands 44 per cent. The result will be that these lands which are suitable only for growing timber will either revert to the state for taxes and yield no revenue or will be sold cheaply to some colonization concern which will pass them on to some unsuspecting person, who will sacrifice a few years of his life and that of his family and then give up in despair to return to the city, and the land goes back to the state and no taxes accrue from it. Common sense should teach the taxing officials in the Lake State that the way to perpetuate the forest resources within their districts is to make reasonable assessments in keeping with other property, but the disposition now is to get all they possibly can out of the timber owner which forces him to cut as quickly as possible.

As to the general question of forestry policy within the Lake States, I believe there has been more interest taken in the subject and more advancement made within the last five years than in all preceding time. The situation grows constantly better. We have faith in our ability as Americans, to some time wake up and muddle through this forestry situation, and do it in time to avoid that gap in forest products production which has been so often predicted.

Discussion of Statistics

Dr. Hugh P. Baker, in leading the discussion on Pulp and Paper Economics, said:

The fundamental national character of the paper industry is evidenced by the increasing dependence of the people of this country upon paper and other products of wood pulp. A day of business life or domestic life in this country, without the help of paper, would be almost incomprehensible—it would be chaos indeed.

In 1923 it is estimated that we used just a little over 6,000,000 cords of wood, valued at something over $90,000,000. During the year we imported, entirely from Canada, 1,400,000 cords of wood. For the same year it is estimated that we used 5,019,000 tons of wood pulp, though we produced but 3,613,660 tons, importing the remaining amount consumed. This use of pulpwood and pulp resulted in an estimated production of 7,198,000 tons of paper of all grades. It is safe to estimate that of the 7,000,000 tons of paper produced in the United States in 1923 more than 95 per cent was made wholly or in part from wood pulp.

The paper industry has become indeed a wood using industry, more and more dependent upon a steady supply of wood from the forests of this country. While the paper industry uses but 4 per cent, approximately, of the total annual wood cut of the country, yet it must have this wood moving to the mills in a steady stream through the year.

The lumber industry has often been called a nomadic industry. Over against this idea of a nomadic lumber industry, we know that the paper industry is an unusually permanent industry in sections in which it has been developed. Large capital is involved in the building of pulp and paper mills, and mills cannot be moved economically.

The U. S. Forest Service has made splendid progress in securing accurate information as to available timber resources. The service is being looked to as never before by the wood using industries, and by business men generally, for accurate information and for help, particularly in the using of wood after it is cut from the forest. There is great opportunity for sound leadership by the service in bringing about the practice of forestry by the industries of the country. It is hoped that the industries themselves and such national organizations as the Chamber of Commerce of the United States, will assist in the educational work necessary before the interest and aggressive support of the people can be developed to the point of their demanding funds necessary for a national timber survey.

The fact that the paper industry is a wood using industry is of such recent acceptance in the industry itself, generally speaking, that the average paper manufacturer has not yet come to think of himself as a timber owner and as a lumberman to the extent to which he harvests and uses timber. The experience in the Scandinavian countries and in other foreign countries, and the more recent experience of some of our mills in the South and on the West Coast, indicates that the owner of a self-contained mill, particularly as he comes to the practice of forestry, must become a lumberman that he may use all of the forest in the most effective way.

Complete Statistics Needed

As has been pointed out in this paper (upon the economics of pulp and paper) accurate and complete statistics covering the forest resources of the country, the production and use of wood and pulp, and the production of paper, are fundamental to the satisfactory continuance of the industry. The industry was forced last year to take over certain phases of statistical work carried on previously by the government. Some of this statistical work can be carried on more effectively by associations within the industry than in any other way. We need, however, more accurate statistics as to wood production generally, and we urge that the Forest Service be given the facilities to carry forward the statistical work which they have already under way.

Reference has been made to what the Forest Service can undertake in the way of economic studies of importance to the pulp and paper industry during the next five years. The sequence, as outlined in the paper which is being discussed, might be changed so that a study of forest taxation and the cost of growing timber shall be carried forward even to the elimination of present stumpage and log price studies. Wrong form of taxation of forest lands in this country is the second most destructive factor in the using of our forests. The public should be made to understand thoroughly just the effect of wrong forms of taxation and how the taxing of the forest crop annually has forced the owner in many cases to cut instead of to conserve.

Great help could be given the industry by making careful studies in two or three representative states of available timber supply and of forest soils and their relation to the wood using industries. Such a study should be both an economic and social study, and should be applied not on a theoretical basis but on the practical foundation of the operation of industry within those states.

It is exceedingly important that the paper industry should have accurate information as to the pulp and paper industry in foreign countries, including Canada. Such information should indicate the relation of the depletion of forests in those countries to the development of industry, and how the introduction of modern methods of forest practice have benefited industry. Furthermore, the paper industry of this country should have constant and accurate statistics as to production, marketing, and use of pulp and paper in foreign countries.

There is much that the Forest Service can do in helping the paper industry through more thorough studies of the economics of pulp and paper. We are counting upon this help in the perpetuation of our great industry.

Future Paper Development

Norman Wilson addressed the conference on "Future Development of the Paper Industry." He said:

In the effort to contribute something worth while regarding "The Future of the Paper Industry," I have found it quite a problem to determine how much leeway to allow my imagination.

Consideration of a few of the outstanding developments of the past twenty-five (25) years may aid us in gauging the future.

Our industry is one of the six largest in this country. Mere tonnage does not prove one's importance but relative figures do show whether one is standing still or going ahead.

In 1899 this country produced approximately 2,100,000 tons of paper while in 1923 we produced 7,200,000 tons. The increase was quite uniform from year to year until 1920—since then we are just about holding even.

While I take no issue with those who hold that much of our news, fiction and so-called history might better have remained unpublished, still it is indisputed that the real advance of civilization followed the invention of the printing press, and the volume production of paper by machinery rather than by hand.

As civilization has been benefited and the standard of living improved by the use of book, news and writing paper, so have other branches of the industry been doing their part.

Take note of the introduction and development of the use of paper drinking cups, and of paper towels. These are not merely conveniences, they are also tremendous steps forward in the prevention of contagious and infectious diseases.

Note also the sanitary advantage of up-to-date wrapping practices for the protection and preservation of perishable foods. See the successes achieved in preserving moisture within a package or preventing its entrance if moisture is undesirable.

Note the use of pulp and paper for hospital and medical uses, for insulation, etc., etc.

However, from a standpoint of cost and of efficiency the industry has come to depend more and more upon pulp produced from the tree until it is now estimated that 90 per cent of the fiber used is from the tree.

Substitutes may be found but they will probably amount to little unless the world generally and we in particular fail to safeguard our heritage of the forests by means that are becoming better understood as the need for action increases.

More progress must be made if the paper industry is to be perpetuated on this continent. Our principal competitors abroad are further advanced with this project.

In referring to the problems of this continent, we include the United States and Canada. Canada has some advantage in the amount of available forests as compared to the amount consumed. However, there is but slight difference in their cost of labor and in the value of their currencies; so that their cost of production is fairly close to ours.

It is to be regretted that certain Canadian interests recently sought relief for themselves at our expense. We refer to the suggested embargo of Canadian pulpwood from privately owned property.

Just a word with respect to the marketing of paper. A study of the price trend must convince us of the need to produce at lower cost. While untimely reductions in price are ruinous to any industry, nevertheless it is axiomatic that a low cost of production with an accompanying low price to the consumer has a decided tendency to expend the amount consumed. In proportion to the cost of production paper of all descriptions is being sold at such close prices that very little money is being made at the present time. To protect ourselves and to get back onto a reasonable earning basis, we must reduce our costs and to help expand the market we must prevent our prices from getting out of line with the cost of other commodities.

Secretary Wallace Speaks

Secretary of Agriculture Wallace spoke, in part, as follows:

The Department of Agriculture's primary interest is in the raw materials that grow from the soil. Its traditional interest is, of course, in the production of food, but in the past quarter of a century it has paid an ever increasing attention to the production of wood. It recognizes reforestation as one of our great agricultural problems.

The struggle for raw materials is perhaps the most striking economic fact of our generation. Coal and iron, rubber and oil, food and wood—these and many other basic commodities play an enormous part in shaping industries and nations. As the rich reserves of natural resources have been depleted, the competition for the remaining supplies has become ever keener.

The world's timber supply and our own timber supply are no exception. The vast industrial growth of the past 75 years has drawn enormously on the accumulated forests of centuries, and this quick drain has caught the world wholly unprepared to intelligently handle the problem of forest renewal. In our own country we have been easily deceived by the vast visible supplies of wood and by the comfortable thought that anyway we can make up any deficit by imports. We have tolerated a most costly abuse of our forests.

Now let us remember that the paper industry is only one of the many keen competitors for our diminishing supply of wood. We have less than one-third of our original timber stand left. For timber below saw timber size the drain on our forests exceeds by about three times renewal through growth. In saw timber the drain exceeds the renewal by 5½ times. This means not only heavily overdrawing our supply, but it means an ever sharper competition for the smaller timber on which we must rely after our old-growth forests are gone.

These outstanding facts—the enormous growth of our paper consumption, the dwindling of our raw material, and our dependence on foreign countries for pulpwood, pulp and paper—these facts constitute at once a problem and an opportunity.

Basic to the whole program of future forest management is research—research in timber growing, research in timber utilization, and research in forest economics, including taxation. It is on this basic task of research that we desire to center your attention today. We must remember that it was research, or, if you will, intelligent curiosity, that made paper, and the paper machine, and the engines that drive the paper mill, the trucks and trains that draw its products, and the printing press on which paper finds its highest use. And this same intelligent curiosity must be ever more expertly directed to lead us through the complex maze of modern industrial civilization. This modern world is impossible without research.

Changes in American Writing Superintendents

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., February 12, 1924.—Several changes in mill superintendents took place the past week in mills of the American Writing Paper Company. Thomas Duff, superintendent of the Beebe & Holbrook Division resigned his place to accept the superintendency of a large paper mill in Tennessee. Mr. Duff was with the company several years and is recognized as a skilled papermaker.

William Mathieson, superintendent of the Parsons Division for the past eight years has been transferred to fill the place made vacant by the retirement of Mr. Duff. Mr. Mathieson's work in superintending the manufacture of high grade papeteries, bonds and writings at the Parsons Division well qualifies him for his new position.

George Robinson who has been in charge of the Riverside No. 1 and No. 3 mills will take charge of the Parsons Division and he will be replaced by Herman Grasselt who has been office manager for several years. It was stated in this conection that the American Writing Paper Company proposed to continue its policy of filling positions by promotion and only in exceptional instances engaging superintendents and executives from outside its own force. In this way ability is being recognized and loyalty to the company strengthened.

Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., February 13, 1924.—The Government Printing Office will receive bids on February 15 for 80,000 pounds (100,000 sheets) of various sizes chip board. Bids will also be received by the Printing Office on the same date for 80,000 pounds (100,000 sheets) of various sizes straw board.

The Printing Office has received the following bids for 300,000 9½ x 12 wood manila envelopes: Union Envelope Company, at $5.70 per M.; United States Envelope Company, $5.60, and H. S. Freas & Son, $7.75.

The Government Printing Office will receive bids on February 18 for 7,800 pounds (600 reams) of blue, green, and salmon, various sizes glazed bond paper.

The R. P. Andrews Paper Company has been awarded the contract by the Government Printing Office for furnishing 300,000 pounds of No. 1 white M. F. printing paper in 19-inch rolls at $.0594 per pound. The same firm will also furnish 30,600 pounds (300 reams) of 21 x 31—102 buff bristol board at $.0504 per pound. Bids for this paper were received on January 30.

Naval Stores Men to Meet

[FROM OUR REGULAR CORRESPONDENT.]

SAVANNAH, Ga., February 11, 1924.—Naval stores men of the country will assemble at the De Soto Hotel here on February 21, 22 and 23 for a "Get-Together Meeting" at which matters of common interest will be discussed. To this meeting will come representatives of the paper, soap, varnish, paint, linoleum and other consuming industries—the industries into whose products naval stores enter. President J. C. Nash of the Columbia Naval Stores Company, this city, is chairman of the general committee which is in charge of the meetings.

CHICAGO MARKET ASSUMES AN ENCOURAGING STABILITY

In the Case of Coated Papers and Bonds Improvement Is Most Pronounced—Low Grade Book and Sulphite Bond Conditions Still Remain Unsatisfactory—Pilcher-Hamilton Co. Puts Out a New House Organ—Middle States Wrapping Paper Association Has Successful Meeting and Central States Paper Trade Association Beats All Attendance Records at Recent Session.

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, February 11, 1924.—Stability in several branches of the local paper industry is becoming more of a reality each week. In the finer grades of coated and bonds the improvement is more pronounced than in others. This tendency toward a stable market began about the middle of January with the return of the larger consumers, among which the printing establishments are included. A marked improvement in demand from them indicates that business houses are preparing catalogs and advertising matter for spring and summer trade.

Although prices on the finer grades have not taken an upward turn, prices of raw stock in some instances, have advanced. These increases are noticed in its stabilizing effect on the market. Concessions are disappearing in the higher priced stock. This indicates that producers are getting loaded up on orders and can now afford to reject some of the cheap business.

Conditions in a few branches of the paper industry, however, are still unsatisfactory. This is true of those grades which are overproduced as low grade book and sulphite bond. Some mills went over to the manufacture of these just recently and it meant the flooding of the market with more than it could conveniently consume. Consequently, competition became keen with resultant concessions on every hand.

Coarse papers are coming back very strong. Members of the trade have looked forward to such a situation for some months and now that it is in sight their optimism is renewed and they are preparing for a heavy demand during the next few months. Butchers manila has maintained a steady sale right along inasmuch as this business comes from retailers of foodstuffs, including meats, who usually order the same amount regularly.

A steady increase in prices of roofing stock has featured that division of the market during the past month or so. This week all grades are up $2 per ton, making a figure fully $10 a ton over that which prevailed one month ago. The severe winter weather, however, which came in the last week is expected to have some effect upon the supply and demand.

Pilcher-Hamilton Starts House Organ

A brand new activity has been added to the Pilcher-Hamilton Company, Chicago, large wholesale merchants of papers, in the publishing of a house organ, now in its second issue. And a very creditable piece of work it is, too, with its dual purpose of binding all members of the organization closer together, and serving as an excellent publicity medium.

This organ is termed "Bookan-Wrap," a compound word representing the kinds of paper handled—book and wrapping. It is produced once each month by Henry W. Borchardt, a salesman who serves as editor, while Agnes B. Walsh is assistant. At first, "Kookan-Wrap" was merely for employes, but the needs of its going to prospects and customers was recognized. It was enlarged and the nature of its contents changed to include such items as would appeal to a buyer, including here and there something about the papers handled or a suggestion to users of them as to how they might get more satisfactory results for their particular purposes.

"Bookan-Wrap" is approximately six by nine inches in size. It has 12 pages. The back page always carries a paragraph telling the kind of paper on which the organ is printed.

Middle States Holds Successful Meet

The Middle States Wrapping Paper Association met at the William Penn Hotel, Pittsburgh, Pa., on Tuesday, January 29, in one of the best and most successful gatherings it has ever held.

William C. Ridgeway, secretary of the National Paper Trade Association and N. A. Schoenbucher, director of the Bureau of Accounting, of the National Paper Trade Association, were both guests.

H. J. Merickel, of the Toledo Merchandise Company, Toledo, Ohio, opened the meeting by expressing his appreciation of the large turnout. He took particular pains to introduce Albert Steindler and H. Y. Rehrer, secretary, Fisher Brothers Paper Company, Fort Wayne, Ind., who were both attending their first Middle States meeting.

A large number of charts were presented by Secretary Ridgway, comparing the business of 1921, 1922, and 1923, attempting to show why and how money was made or lost at specific periods.

Mr. Schoenbucher presented some interesting data on the cost of doing business out of stock as shown by the records of a large number of paper houses which he has visited.

In addition to being one of the best attended meetings, this was also a record breaker in point of new members added to the roster. They were: Miller Paper Company, Louisville, Ky.; Ohio and Michigan Paper Company, Toledo, Ohio; Paddoch Merchandise Company, Toledo, Ohio, and the Buckeye Paper Company, also of Toledo, Ohio.

Through the courtesy of the Pittsburgh members, the visiting members were entertained at dinner at the American Club, where geniality reigned under the guidance of E. A. Schofield, of Chatfield & Woods Company, Pittsburgh, who acted as toastmaster.

Broke All Attendance Records

The last meeting of the Central States Paper Trade Association held on Friday, February 1, at the Brown Hotel, Louisville, Ky., broke all records in attendance since the organization was formed.

William C. Ridgeway, secretary of the National Paper Trade Association, and M. A. Schoenbucher, director of the Bureau of Accounting, of the same association, were also guests of the Central States body on the occasion of that gathering.

The Millcraft Paper Company, of Cleveland, Ohio, was unanimously elected a member of the body. This brings the membership to the highest mark on record.

A cost accounting committee was appointed to make recommendations as to the means by which cost of operation might be reduced. It seemed to be the consensus of the meeting that the tendency of the times is toward more economical processes in business and that the merchant must do his share to reduce operating expenses.

News of the Paper Trade

E. Z. Cornwall, of the J. W. Butler Paper Company, Chicago, was confined to his home for a part of last week by illness. He is now completely recovered and is back at his desk again.

A Chicago visitor last week was Ellis Jones, of the Kansas City Paper House, Kansas City, Mo.

Bob Butterworth, of the Chicago office of the Champion Coated Paper Company, spent several days in Des Moines, Iowa, last week.

J. B. Jones, of the Western Newspaper Union, Omaha, Neb., has returned from a trip to North Carolina.

Watervleit Paper Co. Busy

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., February 13, 1924.—The Watervleit Paper Company is running its mill at full capacity 24 hours daily, thus giving steady employment to about 300 hands. Orders are said to be piling up rapidly, some of them being unusually large ones.

MUCH CONSTRUCTION WORK AT THE KALAMAZOO PLANTS

Bermingham-Prosser Co. Directors Considering Plan for Doubling Warehouse and Office Facilities—Consumers' Power Co. to Spend $1,254,150 This Year on Improvements—Dunn Sulphite Paper Co. Award Contract for Preparing Port Huron Mill Plans—Kalamazoo Sedan Plant Being Overhauled by New Owners—Northern Michigan Pulp Co. Affairs Wound Up.

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., February 9, 1924.—Owing to the rapid expansion of business, the Bermingham-Prosser Company, will at the next meeting of the directors, the first week in March, consider the advisability of doubling the size of its present warehouse and office facilities. This will be accomplished by building to cover the entire site owned, which runs through from East Frank street to East North street and abutting on the right of way of the Chicago, Kalamazoo and Saginaw railroad.

This property has a width of 60 feet and a depth of 352 feet. The initial unit was 60 by 176 feet, four stories high. The addition will be of the same size, thus giving a total floor space of 84,480 square feet, reinforced concrete and brick construction, strictly fire proof and the finest and largest wholesale paper warehouse in western Michigan.

Bermingham-Prosser Company, originally organized to engage in the sale of fine papers solely, added a line of course papers, wrappers and twines twelve months ago. The business done by the latter department has exceeded the most optimistic expectations. As result the concern now finds itself badly cramped for room.

Louis P. Simon, secretary, who has returned to his active duties after an enforced stay in New Borgess hospital, reports the outlook for the ensuing year exceptionally bright.

The annual stockholders' and directors' meeting resulted in a preliminary discussion of the proposed building campaign. Officers and directors were also re-elected for the present year as follows: President, Arthur P. Bermingham, Chicago; vice president, Walter P. Bermingham, New York; secretary, Louis P. Simon, Kalamazoo; treasurer, Henry G. Prosser, Chicago. The above four and W. J. O'Donaghue, Kalamazoo, comprise the board of directors.

Plan Extensive Improvements

The Consumers' Power Company will spend $1,254,150 during 1924 on improvements, extensions and betterments of its facilities in Kalamazoo and immediate vicinity.

Frank W. Blowers, local district manager of the concern, authority for the above statement, adds that of that amount $940,000 will be devoted to extension of the electrical department, while $314,150 will be expended on the gas plant and gas distribution system.

The above items are only a part of a statewide program that will call for an expenditure of $15,000,000 this year. This vast sum will provide for the completion of 3,000 kilowatt hydro-electric plant at Alcona, on the AuSable River; the 40,000 kilowatt steam plant near Saginaw and Bay City; 20,000 kilowatt steam turbo generator at the Battle Creek steam plant; 4,000 kilowatt turbine and generator at the new Fulton street steam heating plant in Grand Rapids, together with two new boilers. One item of $750,000 is to be devoted to connecting up the new dam of the Wolverine Power Company on the Tittabakassee river with the Consumers Power system. Provision is also made for preliminary work on the County Line water power plant near Cadillac. In all 150 miles of transmission lines will be built this year.

Dunn Co. Awards Contract

Billingham and Cobb, architects and mill engineers, have been awarded the contract for preparing the plans and specifications for the mill for the Dunn Sulphite-Paper Company, which is to be erected at Port Huron. Mr. Billingham went to Port Huron Friday to take initial steps in the work to be done. The new structure will be a one machine mill, equipped for the manufacture of tissue paper and will cost about $1,000,000, equipment included. It will have a daily capacity of 15 tons daily and will be of the most approved type of construction in every way. The new industry will be located at the point where the St. Clair river and Lake Huron join.

Changes at Graff Plant

D. Graff and Son, who recently purchased the East Willard street plant of the Kalamazoo Sedan Company, is having that structure entirely built over, reinforced and arranged to carry a heavy load. They intend to use a large portion of the structure in connection with the growth and development of their enormous paper stock business. M. Newlander, associated with R. A. LaRoy, prepared the plans for the improvements. The steel trusses are being built by the Kalamazoo Foundry and Machine Company.

Farewell for H. F. Burkhardt

H. F. Burkhardt, transferred from the post of superintendent of the Kalamazoo Stationery Company, to the position of general manager of the Northwest Tablet Company, Minneapolis, Minn., was given a farewell luncheon today. H. A. Wetz, general superintendent of the local plant and several of the employes were in on the conspiracy. The plant foremen presented Mr. Burkhardt with a traveling bag, while each department added miniature models of their product as mementos of the occasion. Mr. Burkhardt came to Kalamazoo 18 months ago from White and Wyckoff, Holyoke, Mass., and has a wide circle of friends here.

Wind Up Pulp Company's Affairs

Winding up of the affairs of the Northern Michigan Pulp Company is noted by the sale Thursday in the Federal court, Grand Rapids, of the physical assets of the concern to Brown and Graff, Grand Rapids and Kalamazoo, who plan to wreck the plant and salvage it.

While the price paid is not officially announced, it is understood to have been approximately $140,000. It included the site of 20 acres at Petoskey, Mich, all buildings and machinery, 1,600 tons of coal, 2,200 cords of pulp wood, 120 tons of sulphur, 530 drums of bleach, all miscellaneous supplies and very valuable water rights.

Since the disastrous fire of over a year ago, in which the digester room was practically destroyed, the mill has operated at small percentage of capacity. At the time of its highest prosperity, it operated three digesters and two wet machines, producing 40,000 pounds of bleached sulphite daily.

Sees Better Business Coming

"I am confident that a healthier condition exists in the business world and that 1924 offers prospects that are most encouraging" remarked S. B. Monroe, heavily interested in the paper industry in Michigan and Canada, also connected with numerous other lines of trade. His observations were not confined to the local field, but included conditions as he found them in New York financial circles.

"Everything looks better for the paper trade," he added. "The past year has been a rather severe one, but the future looks much rosier. The average run of orders received are better than for months past. The outlook is generally encouraging."

Samuel W. Simpson, vice president of the MacSimBar Paper Company, is not at all well and as result has not been able to resume active business duties since his resignation as general superintendent of the Allied Paper Mills. He had returned to Otsego, again taking up his residence there. By means of a long rest he hopes to be able to enter business again. Up to the time of his recent resignation, he had worked almost without a break for over 30 years.

Pioneers

EBG "Liquid Chlorine"

ALSO PIONEERED to Set a Record!

You will find valuable pointers in two booklets we will take pleasure in sending on request—"Producing Bleach Liquor with Liquid Chlorine in the Pulp and Paper Mill" and "Transportation of Liquid Chlorine in 15-ton Tank Cars."

First to enter the paper field—and other fields as well—where it has established a record for accomplishing large savings in plant-handling, transportation and the elimination of sludge wastes and decomposition losses. Ease of control and cleanliness of operation are also factors of prime importance.

The E B G reputation for better service has been sustained for 14 years.

Electro Bleaching Gas Co.

PIONEER MANUFACTURERS of LIQUID CHLORINE

Plant: NIAGARA FALLS, N.Y

Main office: 9 East 41st St., New York

TORONTO'S PAPER DEMAND SHOWS MARKED IMPROVEMENT

February Expected to Show a Large Volume of Turn-over—Major J. I. Hartt a Speaker at Annual Convention of Canadian Lumbermen's Association—Charles W. Cox Uses "Snowmobile" to Transport Supplies to Camp—Charles W. Bates Reports Capacity Demand for Paper Makers' Felts—York County Council Interested in Reforestation Plans—Angus McLean Against Embargo.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ont., February 11, 1924.—There has been some improvement in the general demand for paper and a better feeling now prevails. January was a fair month but business is still spotty and there is a disposition to hesitate in placing large orders, notwithstanding that stocks are low. The spirit of optimism is, however, leavening the trade and, it is expected, that February will show a larger volume in turnover than the preceding month. Prices hold firm in all lines. One of the encouraging omens is the formation of several new companies in the pulp and paper line. Representatives of foreign countries are coming to the city and making inquiries with regard to export business. Book plants are running to fair capacity and toilet and tissue mills are operating fully. The demand for news print continues strong and shipments are going forward in good style. Pulp prices are still weak and the demand not very brisk. Bush operations are going on steadily although complaints are heard with respect to poor ice and too much snow at several points. This is interfering with hauling operations in some districts.

Ontario's Position on News Print

Major J. I. Hartt, of Toronto, superintendent of Crown Timber Agencies, and Hon. James Lyons, Minister of Lands and Forests for Ontario, attended the annual convention of the Canadian Lumbermen's Association in Buffalo. Major Hartt addressed the gathering on the lumber and pulpwood operations in the province, and paid a tribute to the rapidity of the development of the north through the establishment of pulp and paper towns. He stated that a train load of news print left Iroquois Falls every day from the plant of the Abitibi Power and Paper Company for points on the other side of the line and that the train had the right of way. Within one week, spruce trees were cut down, taken to the mill, converted into paper and used in printing the great dailies across the boarder, which constituted a record in service and expeditiousness. Major Hartt outlined the active steps that are being taken to prevent forest fires in Ontario and to regulate cutting operations.

Pulpwood Contractor Runs Snowmobile

Charles W. Cox, of Port Arthur, Ont., who is a large pulpwood contractor, has acquired a "Snowmobile" for taking supplies to his camps across Lake Nipigon, during the winter months. The car makes thirty miles an hour through deep drifts and cuts through the heavy banks with ease. It is a Ford truck with the front wheels removed and set back near the rear transmission wheels. Mr. Cox is taking out an unusually large supply of pulpwood this season.

President McLean Against Pulpwood Embargo

In his annual address before the Canadian Lumbermen's Association, Angus McLean, of Bathurst, N. B., president of that organization, who spent a few days in Toronto last week, said: "A great increase has taken place in the consumption of Canadian spruce and fir timber in the pulp and paper industry. Many of our lumbermen are now engaged in manufacturing pulp and paper and are even more interested in this than the manufacture of lumber. This is a logical movement and is working out to the advantage of the country as a whole. The large capital investment necessary, the permanence of the industry, the economy worked by utilizing so much smaller and inferior wood, much of which was allowed heretofore to go to waste, as well as the large sums paid out by the industry in the way of wages and purchasing of supplies, have already made it the chief industry of our land. We have an abundant supply of suitable wood and ample water powers, the prime factors necessary in the industry. There is no question that very shortly we will be the first country in the world in the production of pulp and paper. The development of this industry is being pushed as rapidly as conditions will allow. We should oppose any move to force this development but allow it to proceed as at present conducted rather than attempt by any artificial means to force the construction of new mills in the country faster than the natural law of supply and demand will permit."

Paper Making Felts Stiffer in Price

Discussing trade matters, Charles W. Bates, of Carleton Place, Ont., who manufactures paper makers' felts, said that his plant was operated at full capacity during the past year but, at present, business is rather slow. Prices range steady with a tendency upward, and although they must advance owing to the increase in raw materials, there is considerable opposition to any rise. Mr. Bates feels that there will be a large volume of business during the present year but, so far as woolen goods are concerned, they are imported with such ease from foreign countries that the outlook is not bright.

Notes and Jottings of the Industry

Fred L. Ratcliff, president of the Ratcliff Paper Company, of Toronto, has gone on an extended trip to Great Britain and the continent and will visit various paper mills while abroad.

E. L. Florence & Son, Ottawa, have been awarded the contract for waste paper collections from the parliament buildings for the coming year.

Ralph B. Hornibrook, son of J. T. Hornibrook, secretary-treasurer of Brown Brothers, wholesale paper dealers, Toronto, passed away last week. The sympathy of the trade is being extended the father who has been associated with the paper industry for a very long period.

A charter has been granted to Card and Paper Works, Peterboro, to acquire the business formerly carried on by Turner Brothers, jobbers in paper and paper products. The authorized capital of the new organization is $75,000.

C. Nelson Gain, general manager of the Garden City Paper Mills, St. Catherines, formerly of the Don Valley Paper Company, spent a few days in Toronto last week on business.

John Hewitt and A. J. Allen, of Paper Sales, Limited, Toronto, spent last week in Buffalo attending the great convention of tanners.

George Winlow, sales manager of Lincoln Mills, Merritton, who was injured in a recent train wreck at Belleville and is now in a Toronto hospital, has not been recovering as rapidly as anticipated and it will be some little time yet before he is able to resume his duties.

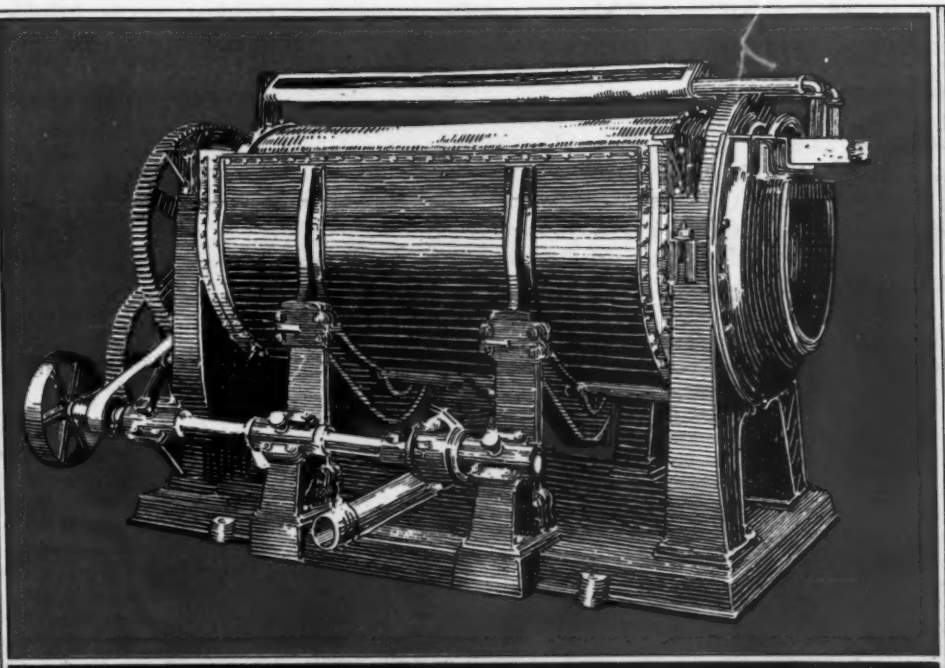
Among the callers on the Toronto trade lately were C. Deforest Coutts, of the Whiting Paper Company, Holyoke, Mass., and T. A. Flockhart, secretary-treasurer of the Rotogravure and Printing Company, Bound Brook, N. J.

Samples of a new line of wedding bristol are being sent out to the wholesale trade by the Howard Smith Paper Mills. The bristols come in a complete range of substances and sizes, in both plate and kid finish, and are made from fine rag stock of high color.

S. L. Davidson and Hughes Engraving and Lithographing Company, Toronto, recently made an assignment to N. L. Martin, Toronto. Several printing and paper houses are creditors of considerable amounts.

The United Waste Paper Company have purchased a factory building on Frederick street, Toronto. A. Grusberg is the president of the organization, which is doing a good business.

The Rolland Paper Company has recently sent out to the trade some effective advertising on "superfine linen record" entitled, "Letters of Famous Canadians."



14,000 TONS OF PAPER PASS

BIRD SCREENS

THROUGH BIRD SCREENS DAILY

The decided preference of the Paper Industry for Bird Screens is best shown by the fact that 14,000 tons of paper—or more than half of the total production for the United States and Canada—pass through Bird Screens daily.

Catalog on Request.

BIRD MACHINE COMPANY
SOUTH WALPOLE ~ MASSACHUSETTS

Western Representative
T. H. Savery, Jr., 1718 Republic Bldg.
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Canadian Builders of Bird Machinery
Canadian Ingersoll-Rand Co., Ltd.
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6180

NATIONAL CONTAINER MEN DISCUSS VITAL QUESTIONS

Recent Meeting Held in Chicago Proved One of Unusual Importance—Campaign Launched for More General Use of Fibre Boxes—Arrangements Made to Place Inspector in New York District—Statistical Committee Makes Several Recommendations—F. J. Kress Elected a Member of Executive Committee—Next Meeting to Be Held in New York City, March 25 and 26.

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Ill., February 11, 1924.—How to increase the use of corrugated and solid fibre boxes; co-operation with the National Association of Hat Manufacturers; proposal to increase dimension limits of freight boxes, cloth tape standards, and strawboard specifications; containers in transit; the exclusion of fibre boxes as containers for poisonous articles by freight, and several other vital phases of the industry were discussed at the last meeting of the National Container Association, held at the Drake Hotel, Chicago, January 22 and 23. This was the first meeting since the annual meeting last Novembeer. President John L. Barchard, of Hummel & Downing Company, Milwaukee, Wis., presided. The meeting was exceptionally well attended, a large portion of the membership being present.

Campaign to Increase Use of Fibre Boxes

The appointment of two trained experts who will make investigations and studies of various fields in which the use of corrugated and solid fibre boxes may be introduced or increased, was the recommendation of the Sales Promotion Committee. This is the plan of action proposed by the committee, and adopted by the members, which is in keeping with the policy of the association to extend the use of corrugated and solid fibre boxes in all proper fields. The committee is composed of Chairman, J. P. Brunt, Mid-West Box Company, Chicago; J. J. Brossard, Fort Wayne Corrugated Paper Company, Fort Wayne, Ind.; J. M. Connor, Philadelphia Paper Manufacturing Company, Manayunk, Pa.; George W. Gair, Robert Gair Company, New York, and Irving Hill, Lawrence Paper Manufacturing Company, Lawrence, Kans. There seems to be no doubt that by working in conjunction with the package designing laboratory of the association maintained at Chicago and the research department at the Mellon Institute, Pittsburgh, this campaign will result in substantial benefit to the industry by means of converting to the use of fibre boxes shippers who have not as yet adopted them. Members are co-operating with the committee and with the general manager of the association in the furtherance of this work and many valuable suggestions have been received as to ways and means of getting the best results.

President Barchard reported to the members subjects which had been considered by the Executive Committee at a meeting in Chicago, January 21, asking that members discuss freely the subjects which were before the gathering.

Co-operation with Hat Manufacturers

For the purpose of securing a more equitable rating on hats packed in corrugated and solid fibre boxes, as compared to the rating when packed in wood boxes, the association has been co-operating with the National Association of Hat Manufacturers. As to hats, the classification prescribes a higher rating when shipped in fibre than when shipped in wood. The Consolidated Classification Committee have declined to adjust this discriminatory rating. It is quite probable that the case will be carried by the hat producers to the Interstate Commerce Commission.

Among the important subjects now demanding attention from the Standardization Committee are the following: proposal to increase dimension limits of freight, cloth tape standards, and strawboard specifications. Chairman Clarence J. Schoo submitted the report of this committee which is composed of Chairman Sidney Frohman, Hinde & Dauch Paper Company, Sandusky, Ohio; R. B. Koken, Scharff-Koken Manufacturing Company, St. Louis, Mo.; Dulaney Logan, The Mengel Company, Louisville, Ky., and M. W. Waldorf Paper Products Company, St. Paul, Minn. President Barchard asked this committee to make a review of Rule 41 and to suggest any changes which should be made.

Research Facilities at Mellon Institute

The National Container Association has made arrangements to place an inspector in the New York district in the immediate future.

A definite policy with regard to the use of the association research facilities at the Mellon Institute, Pittsburgh, was adopted.

A resume of classification matters was included in the complete report of General Manager G. R. Browder, which covered the activities of the organization since the annual meeting. In connection with the Indian Packing Corporation Case, which is pending before the Interstate Commerce Commission, he referred to the drum tests conducted by the former associations, the results of which went far toward proving to the satisfaction of the Commission's Examiner that glass-packed food products, when properly protected in corrugated or solid fibre boxes, constitute a safe shipping package and that there is not justification for higher ratings on the articles when packed in glass on the ground that the package is unusually fragile. Mr. Browder also reported that he had recently been in conference with the Parcel Post Committee in regard to proposed specifications for parcel post packages.

Over Two Billion Containers in Transit

That there were over two billion containers of all kinds in transit during 1923 in l. c. l. freight, of which almost one-third consisted of corrugated and solid fibre boxes, was one of the facts brought out by Edward Dahill, Jr., engineer, Freight container Bureau, American Railway Association, in an interesting talk following the luncheon. Mr. Dahill included container statistics secured by first-hand investigation and check of shipments in all kinds of containers in transit and at freight stations.

The figures which he presented indicated that second-hand containers cause a great deal of trouble and are twice as likely to cause trouble in transit as new containers.

Recommend Changes in Statistic Gathering

Some changes were advised by the Statistical Committee as to certain of the statistics being gathered by the association, all with a view to making the information of greater value. This committee has been making a complete review of all statistics collected and disseminated by the association, since the November meeting. The committee is composed of Chairman, F. M. Durbin, Sefton Manufacturing Company, Chicago; James B. Fenton, Fenton Fibre Box Company, North Tonawanda, N. Y.; F. J. Kress, F. J. Kress Box Company, Pittsburgh, Pa.; A. J. Redemski, Alta Box Company, Chicago, and Samual Samuels, American Corrugated Paper Products Corporation, New York.

Elect Kress Member of Executive Committee

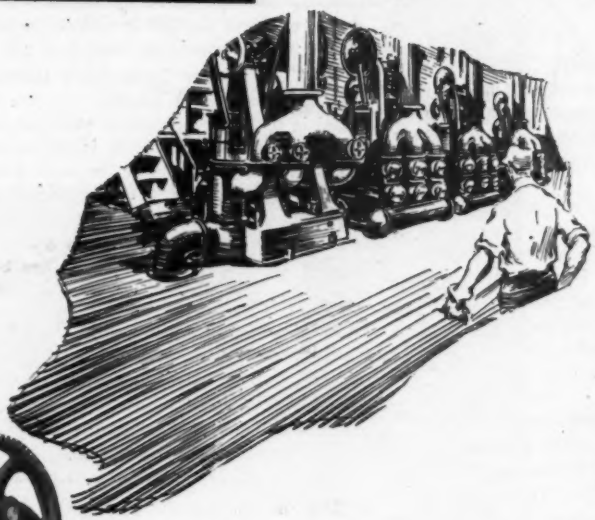
F. J. Kress, who has the distinction of being the first president of the National Container Association, was unanimously elected a member of the Executive Committee for the ensuing year.

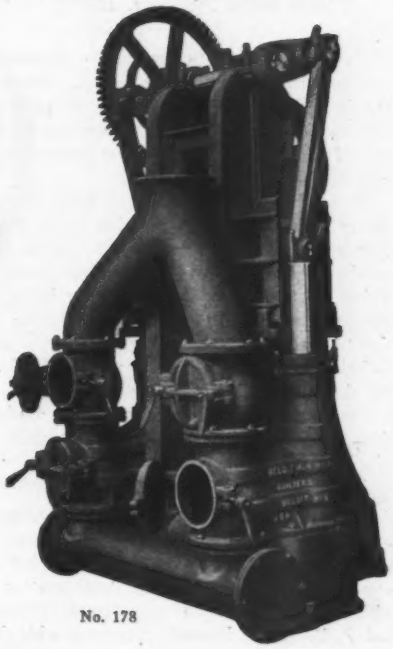
Dr. E. O. Merchant talked on general business conditions, M. C. Walsh, the Association Fellow at the Mellon Institute reported upon research activities since the last meeting.

The next meeting of the association will be held in New York City on March 25 and 26. Samual Samuels and S. A. Agar were appointed a special committee to make arrangements for a dinner on the evening of March 25.

BELOIT IRON WORKS PAPER MACH'Y BELOIT WIS

The Efficiency Pump for Paper Mills





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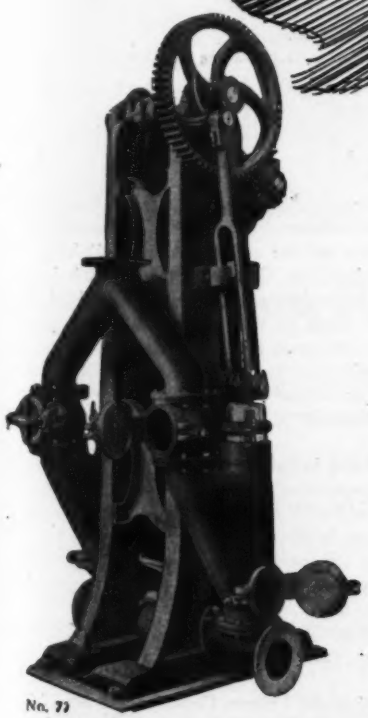

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BELOIT pumps are called "heavy duty" pumps because they are sturdy and strong. They are built for continuous 24-hour service and are gluttons for hard, steady work. They are regarded as the present-day *efficiency* pump for paper mills.

On our triplex pumps you will find forged steel crank shafts instead of cast steel. Our locomotive type connecting rod (regular equipment on our heavy-duty pumps) takes up the wear on crank and wrist pins while pump is in operation. The self-aligning feature prevents undue strain on cranks or frames.

If ever a part does become broken or worn out after years of hard usage, their construction is so handy that the repair can be effected easily and quickly, without the necessity of buying a considerable portion of a new pump.

Thousands of experienced board makers the world over know that Beloit pumps "deliver the goods."

It will pay you to turn first to BELOIT.

Beloit Iron Works BELOIT IRON WORKS PAPER MACH'Y BELOIT WIS **Beloit, Wis., U. S. A.**

Established 1858

PHILADELPHIA FINE PAPER BUSINESS HITS ITS STRIDE

Steady Buying Develops During Week with Occasional Orders of Magnitude—Committee of Fine Paper Men Named to Work on Attendance for Graphic Arts' Dinner—Anderson Paper Co. Organized and Offices in Drexel Building Secured—Warwick C. Miller Addresses Advertising Women on Paper Making in Japan—Martin E. McCann Joins James Andrews, Inc.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., February 12, 1924.—February business for the fine paper distributors during the week seemed to hit its stride. The market was free from all spectacular features—it was simply one of steady buying with a few exceptionally large orders to give zest to the routine.

As good a condition does not exist in the coarse paper division partly from the fact that buying is not being done with as much freedom as in the fine and partly because of what many regard as unwise competition to get the business away from the other fellow. Prices on the domestic products are being cut in this eager competition, however, that it is necessary to do so to meet the competition of many lines of foreign made paper which are being offered. Offerings of Esthonian kraft as low as four cents laid down on the docks in Philadelphia are being made.

The week's gain in the paper stock business was restricted entirely to mixed papers of the better grades, used in manufacture of binders box and containers board. The buying caused prices to become firmer although no substantial advance was made.

Anderson Paper Co. Organized

Organization of the Anderson Paper Company has been completed and offices have been secured in Suite 304 Drexel Building. The new firm consist of Albert H. Anderson for many years associated with A. S. Datz & Sons as salesman, covering the printing trade, and P. B. Sibson formerly connected with the Molten Paper Company, the Garrett-Buchanan Company and A. Hartung, Inc., as sales representative. The newly organized paper house will deal as mill representatives for a line of printing papers, cardboards, bonds, ledgers and book papers, and will, in addition to conducting the offices in the Drexel Building, have a warehouse for the storing of a large stock of papers.

McCann Joins James Andrews, Inc.

Martin E. McCann, lately on the city sales force of the Dill & Collin Company, has associated himself with James Andrews, Inc., and will visit the printing and fine paper trade in this connection. Mr. McCann has been a paper salesman for the last 21 years, representing among others the Magarge & Green Company and the Megarge-Hare Company.

Fibopak Company Reorganized

The Fibopak Sales Company, the recent reorganized firm which for two years conducted the Fibopak company, manufacturers of fiber containers for transportation purposes, such as large size fruit and vegetable barrels and cannisters, announces the distribution of stock in the new company will be made through Julian Armstrong, Inc., of Chicago. The entire capital stock consists of 100,000 shares of no par value and 50,000 shares of this stock is to be sold to corporations and individuals interested in the manufacture of fiber container box board, with the other half to be offered to the public at a price in advance of that of the first 50,000 shares.

Talks on Japan Paper Making

Paper making in Japan was demonstrated in a talk given by Warwick C. Miller, head of the Philadelphia branch of the Japan Paper Company at the meeting of the Philadelphia Club of Advertising Women held in the Bellevue-Stratford. In his talk, which was visualized by picture slides, Mr. Miller showed the entire process of paper making in Japan by hand and as the mills are conducted. The pictures were secured by Manager Miller during his recent services as purchasing agent for the Japan Paper Company in Yokohama where he maintained headquarters previous to the earthquake catastrophe.

Reigel & Co. to Distribute Dilco Papers

Formal announcements went out during the week by Riegel & Co., Inc. that on February 1 the firm became in Philadelphia and adjacent territory distributors of the complete line of fine book paper, manufactured by Dill & Collins Company. They also take over the personnel of the Dill & Collins city sales force as well as operate the central warehouse located at 140 North street.

Marker Takes Long Delayed Vacation

George Washington Marker, who now has been continuously engaged in the paper business as salesman for more than two score of years and at the present time is representing emeritus of the D. L. Ward Company, left during the week with Mrs. Marker for a trip of indeterminate length to Palm Beach, Florida. This has been the first vacation Marker has taken for many years and the longest one since he entered the business more than 40 years ago with the then firm of Southworth, Buckley & Co.

Charles L. Van Reed Dies Suddenly

The trade learned with deep regret this week of the sudden death in Reading, Pa. of Charles L. Van Reed, senior member and president of the Van Reed Paper Company. Mr. Van Reed was a descendant of a long line of ancestors all of whom have been identified with the industry, and the story of whom was told in a recent anniversary issue of the PAPER TRADE JOURNAL.

General News Items

S. C. Knode of the Albemarle Paper Manufacturing Company, Richmond, Va., was one of the visitors of the week to the local trade.

Charles W. Williams & Co. are distributing a new series of booklets illustrating its line of standard stock of glaze flint, printed and fancy papers.

Arnold Tiernan, treasurer of Phillip Griffith Envelope Company, is confined to his home by rheumatism.

The newly erected scales on the railroad siding adjoining the Philadelphia Paper Manufacturers' Company at Manayunk is now completed, and ready for the weighing of stock in carload lots, accommodations having been made on the scale for a single carload. Repairing of the damage to the stock shed recently destroyed by fire also has been accomplished.

J. F. Chism of the Piqua Strawboard Company who is eastern sales representative, will leave for a trip to the western mill during the month.

There has just been installed in the plant of Harvey Garrett, head of the Edwin T. Garrett corporation at Lansdown, an 86 inch cylinder machine operating on a line of tissues. It came from the plant of the Scott Paper Company in Chester.

Fire which swept the rag and paper stock house of P. H. Berman, 3425 Market street, destroyed the entire building and stock resulting in damage estimated at $25,000.

A similar fire in Camden resulted in the destruction of 2,500 tons of waste paper in the stock warehouse of Bantivoglio & Sons, 261 Division street.

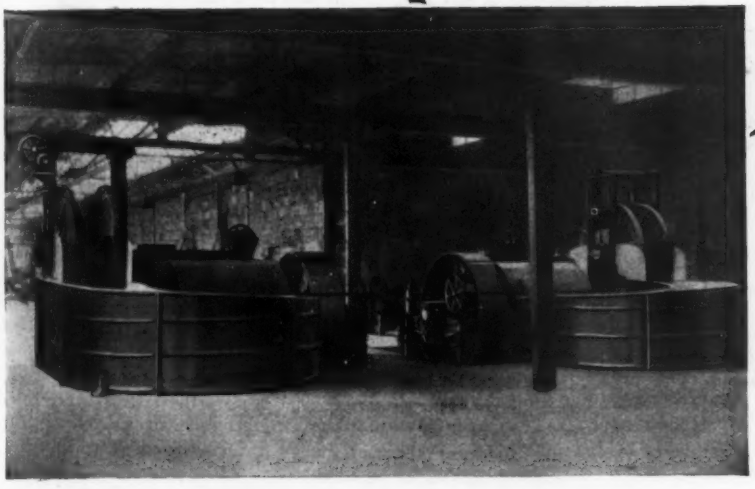
There had been appointed to the Finance Committee of the Philadelphia Chamber of Commerce, Charles J. Cohen, head of the Charles J. Cohen Envelope Company.

Announcement was made during the week by the E. I. DuPont DeNemours of Wilmington that the American and French interests owning patent rights for the transparent sheet paper known as cellophane have been assumed by the DuPo Cellophane Company which is erecting a plant in Buffalo for the manufacture of wrapping material.

Famous Products Series No. 12

ALLIED PAPERS

ALLIED PAPER MILLS
DEPENDABLE
PAPERS
KALAMAZOO, MICH.



The Niagara Beater *is used in making* Allied Papers

Printers all over the country know and use Allied "dependable" papers. Those who do not use them are fast becoming acquainted with their excellent qualities through the fine advertising campaign being conducted by the Michigan firm. The high quality of Allied Papers is due to three causes: Good materials, care in making, and well equipped mills. The Niagara Beater is used in making Allied Papers. Advantages offered only by this beater are reflected in the excellence of the Allied product. A letter or post card will bring you further information regarding these advantages of the famous Niagara. Write today.

VALLEY IRON WORKS COMPANY

Plant:
APPLETON, WISCONSIN

New York Office:
350 MADISON AVE.

New York Trade Jottings

The Canadian Export Paper Company, Ltd., of Montreal has leased, through Robert M. Catts, a space in the Park-Lexington Building for its Eastern executive headquarters.

* * *

The Sutphin Paper Company, Inc., Herman Wunderlich, treasurer, 439 Lafayette street, has been elected to membership in the Merchants' Association of New York.

* * *

The Continental Paper and Bag Mills have declared a regular quarterly dividend of 1½ per cent on common and 1½ per cent on preferred, both payable February 15 to stockholders of record February 8.

* * *

E. H. Rollins & Sons of 43 Exchange place are offering a new issue of first mortgage 6½ per cent sinking fund gold bonds of The Parker-Young company. The bonds are dated January 1, 1924, and are due on February 1, 1944.

* * *

A petition in bankruptcy has been filed against the Columbia Ruling Company, Inc., stationers, 72 Greene street, by the Hamilton Card and Paper House, $344; Max Schwartz, $96; Brighton Products Company, Inc., $75. Liabilities are about $12,000 and assets about $10,000.

* * *

E. H. Rollins & Sons and F. L. Carlisle & Co. are offering a new issue of $1,000,000 Power Corporation of New York three year 6½ per cent gold debentures due on February 1, 1927. Ownership of this utility is vested in the same interests as the Northern New York Utilities, Inc., and the St. Regis Paper Company.

* * *

The Cameron Machine Company is planning to send some very interesting circular matter to the trade. The first of the series has just been issued and will continue over several months with the object of giving every potential user information concerning what the Cameron Slitting and Roll Winding Machine will accomplish. Any one in the paper industry may obtain the complete series by dropping a line to the company at 61 Poplar street, Brooklyn, N. Y.

* * *

The export and domestic machinery and paper mill supply business conducted by the late H. B. Wadsworth at 51 East 42nd street, New York, will continue to be operated by his widow, Mrs. Jessie B. Wadsworth, under the title of H. B. Wadsworth, Inc. Mrs. Wadsworth is familiar with the paper and pulp industry, as for over seven years she handled all the office details of her husband's business and traveled considerably among the mills during this period. Associated with Mrs. Wadsworth in the conducting of the business is C. W. Quinn who is well known in the industry, formerly being connected with Craig, Becker and Company and the R. F. Hammond Company.

* * *

Henry H. Sutphin, H. Wunderlich and John T. Leal, officers and directors of the Sutphin Paper Company, Inc., have formed a new company known as The 439 Lafayette Street, Inc., capitalized at $50,000 to purchase the six-story building on a plot 52.6 x 79, at that address, 439 Lafayette street, now occupied by the Sutphin Paper Company, Inc., as lessee. The Inland Realty Company, Wm. H. Whiting, president, is the seller. The deal was negotiated by Wm. H. Whiting & Co. and Sillcocks, Gedney & Holmes, attorneys representing the new buying interests. The company needs the extra space in which to carry on the natural expansion of its business and part of the building will be used for this purpose.

* * *

While it has been generally known in that the Parsons Trading Company is retrenching the following statement from M. C. Parsons, president, will be interesting as showing the exact situation of the company: "While we are curtailing our business through the reduction of our staff here and abroad, and unless World conditions improve will probably decide to liquidate, we shall for the time being accept any desirable business that comes to us. We lost at the end of the War very heavily through rejections on shipments of customers' orders which were manufactured under War conditions, and since then European competition has made it impossible for us to meet our heavy over-heads profitably, so that retrenchment seemed the wise course for the present."

* * *

Edgar Rickard, President of the Pejepscot Paper Company, has just returned to New York after spending several days at the company's mills, Brunswick, Me. In regard to changes which have taken place in the local management, he stated that having completed the first unit in a plan for rebuilding the equipment, F. C. Clark, has retired a resident manager, and the regular staff will carry on the operations. Charles Dickinson, general superintendent for the past thirty years, will have charge of the operating department, and E. S. Catlin, for the past three years chief assistant in the administrative branch, will act as direct administrative representative of the President and Board of Directors. The R. B. Wolf Company will confine its connection with the company to such work as it may be called upon to do as consulting engineers, but will not perform any service in the administrative functions of the company.

* * *

Johaneson, Wales & Sparre, Inc., 16 East 41st street, have opened a paper department. In announcing this new department the company says: "We have been assured of close co-operation from several New York State paper mills, and as a result have opened a paper department under the direction of J. R. Newton, who is in intimate touch with each one of these mills. Through our past experience in the pulp business we have learned to appreciate the importance of service to our customers, and therefore this is thoroughly understood by our paper department at the outset. Our mill connections manufacture paper that has already proven its suitability to many consumers, and because these mills are located in New York State, it means low freight rates and quick deliveries in this vicinity. Whenever you are ready to purchase paper either on contract for regular deliveries or an extra carload for immediate shipment, please give us an opportunity to figure with you. Our February prices are particularly attractive, and we would be pleased to quote same and submit samples upon request."

Donnacona Increases Capital

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., February 12, 1924.—A re-arrangement of the capitalization of the Donnacona Paper Company involves the following changes: The authorized common stock has been increased from $1,500,000 to $3,000,000 and at the same time the par value has been changed from $100 per share to $20 per share, and a split up on a five to one basis is being made. It has not yet been decided whether the additional $1,500,000 common stock will be issued. The preferred has been left at $2,000,000. An additional newsprint machine has been brought into operation, which has been producing 60 tons per day during the past week. This brings the annual output of the company up to 60,000 tons of newsprint. The new machine was financed by a bond issue made a year ago.

Wood Pulp Importers Elect Officers

The Association of American Wood Pulp Importers met in New York, Wednesday of last week and elected the following officers:—

A. J. Pagel, president; J. F. Patton, vice president; Orval A. Wales, secretary; O. Hylin, treasurer; W. H. Anders, member of board of directors; H. E. Atterbury, national councillor; J. Millar, substitute national councillor.

Established 1886

Appreciation

Experience is wisdom. From experience we have learned that to give just a little more than expected will bring good dividends in the way of appreciation, friendship and more business from the same source. It is another name for service. We have the ability to perceive and the willingness to carry out just such policies, which mean so much for our customers.

May we remind you that we are General Head Quarters for all grades of Wood Pulp.

M. GOTTESMAN & COMPANY

—INCORPORATED—

18 East 41st Street

New York, N. Y.

U. S. A.

European Offices:
Stureplan 13,
Stockholm, Sweden.

PAPER AND PAPER STOCKS IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending November 30, 1923, and for the Ten Months Ended November 30, 1923, as Compared with Corresponding Months of Previous Year

IMPORTS—PAPER.

Paper and Manufactures of		November 1922 Quantity	November 1922 Value	November 1923 Quantity	November 1923 Value	Eleven Months Ended November 30 1922 Quantity	Eleven Months Ended November 30 1922 Value	Eleven Months Ended November 30 1923 Quantity	Eleven Months Ended November 30 1923 Value
Paper, except printed matter (total)		.....	$8,214,556	.....	$9,410,742	.....	$77,713,748	.....	$105,612,679
Printing paper—									
Standard news print	lbs. Free	196,230,734	6,941,615	216,726,377	8,157,923	1,861,546,791	65,342,630	2,386,679,151	89,236,305
All other, n. e. s.	lbs. Dut.	1,405,801	61,885	1,546,906	72,121	3,978,766	257,797	15,439,341	770,119
Grease proof and waterproof papers	lbs. Dut.	183,097	17,139	301,297	28,952	[1]472,121	[1]37,966	2,763,855	258,249
Wrapping paper	lbs. Dut.	8,631,268	396,014	6,392,010	275,004	58,358,703	2,388,898	81,666,940	3,635,959
Writing, drawing, bond, etc.	lbs. Dut.	141,003	35,888	207,518	43,543	[1]427,952	[1]106,169	3,193,289	608,553
Surface coated	lbs. Dut.	57,545	17,481	82,470	22,243	857,113	208,097	1,040,891	286,430
Tissue papers	lbs. Dut.	165,369	60,232	193,273	62,607	[1]317,505	[1]110,743	1,801,090	835,044
Paper boards—									
Pulp boards in rolls	lbs. Dut.	3,128,856	68,328	3,414,884	105,035	56,473,522	1,431,076	72,517,142	2,066,158
Other paper boards, n. e. s.	lbs. Dut.	1,556,567	34,081	2,098,713	59,479	[1]4,349,024	[1]116,902	22,673,171	663,956
Cigarette paper, cigarette books and covers	lbs. Dut.	378,879	274,903	563,710	139,343	.....	3,915,036	10,292,221	2,694,872
Photographic paper	lbs. Dut.	284,071	49,549	218,371	45,375	2,384,686	458,163	2,012,583	433,866
Hanging paper	lbs. Dut.	237,303	24,031	1,590,330	61,255	.....	538,335	8,859,712	478,587
Decalcomania, not printed	lbs. Free	14,122	5,177	9,098	1,784	.....	92,271	326,161	85,390
All other	lbs. Dut.	.....	228,233	.....	336,078	.....	2,709,665	.....	3,559,191
Books and other printed matter (total)		.....	611,081	.....	857,671	.....	6,800,324	.....	8,162,687
Books and other printed matter	Free	.....	.....	.....	.....	.....	[2]2,947,368	.....	.....
	Dut.	.....	.....	.....	.....	.....	[2]1,642,790	.....	.....
Books and pamphlets in foreign language	lbs. Free	205,352	80,934	149,360	87,355	[2]378,156	[2]210,046	1,474,780	921,302
Books, maps, music, etc., 20 years old	lbs. Free	29,602	122,767	45,623	203,999	[2]64,202	[2]423,668	348,052	1,605,699
Other books, etc.	lbs. Free	136,443	97,476	162,694	104,628	[2]265,315	[2]200,940	2,041,851	1,449,146
Books, pamphlets, and music, n. e. s.	lbs. Dut.	188,014	163,515	329,010	220,327	[2]468,155	[2]396,398	2,816,063	2,198,792
Maps, charts, and other printed matter, n. e. s.	Dut.	.....	45,603	.....	73,024	.....	[2]116,311	.....	639,334
Post cards, lithographic	Dut.	.....	19,935	.....	8,302	.....	77,450	.....	72,658
Lithographically printed matter, n. e. s.	lbs. Dut.	.....	.....	.....	.....	[1]1,480,645	[1]587,467	.....	.....
Cigar bands, labels, and flaps	lbs. Dut.	19,009	16,275	18,247	18,247	[2]31,105	[2]32,429	233,443	192,900
Decalcomanias	lbs. Dut.	16,214	20,591	25,531	37,017	[2]39,779	[2]48,092	165,413	241,703
All other	lbs. Dut.	199,908	43,985	254,495	104,772	[2]454,138	[2]117,365	2,076,980	841,153

CRUDE PAPER STOCK.

Rags for paper stock	lbs. Free	31,925,082	484,511	33,391,843	645,147	274,324,775	4,250,846	360,428,272	6,479,729
Waste bagging, waste paper, etc.	lbs. Free	13,687,699	155,374	6,682,162	88,128	[2]31,071,127	[2]360,209	120,918,025	1,654,041
Old rope and all other paper stock	lbs. Free	8,347,169	300,188	10,407,883	532,083	143,985,094	3,697,839	95,433,276	4,377,703

WOOD PULP.

Mechanically ground	tons. Free	24,737	830,221	27,380	946,778	165,503	4,753,573	235,894	8,244,003
Chemical wood pulp—									
Sulphite, unbleached	tons. Free	56,955	2,861,742	35,137	2,225,247	353,802	18,452,533	419,216	24,044,654
Sulphite, bleached	tons. Free	24,757	2,161,088	22,959	1,945,890	189,598	16,116,159	231,715	20,678,253
Total sulphite	tons	81,712	5,022,830	58,096	4,171,137	543,400	34,568,692	650,931	44,722,907
Imported from—									
Finland	tons	2,332	136,873	3,151	219,645	28,232	1,477,265	66,146	3,856,774
Norway	tons	10,157	686,797	4,992	433,456	60,899	4,425,317	64,008	5,166,258
Sweden	tons	39,876	2,177,186	17,269	1,188,375	183,052	10,133,470	186,245	11,748,450
Canada	tons	27,212	1,890,283	24,285	1,765,999	245,670	17,084,298	271,476	19,664,058
Other countries	tons	2,135	131,691	8,399	563,662	25,547	1,448,342	63,056	4,287,367
Soda pulp	tons. Free	97	7,370	616	37,432	[2]197	[2]12,054	4,918	304,911
Sulphate pulp, unbleached	tons. Free	30,248	1,758,369	16,828	1,090,233	235,115	13,746,621	208,327	13,649,587
Imported from—									
Finland	tons	821	43,765	830	50,184	18,816	910,621	14,683	866,357
Norway	tons	1,089	55,912	450	28,859	7,168	367,657	8,342	488,655
Sweden	tons	15,565	818,381	7,497	462,532	81,629	4,198,529	63,642	3,892,223
Canada	tons	12,723	835,952	7,846	536,337	125,982	8,178,660	120,041	8,289,984
Other countries	tons	50	4,359	205	12,321	1,520	91,154	1,619	112,368
Sulphate pulp, bleached	tons. Free	1,074	74,075	851	57,274	14,413	911,059	15,372	1,076,331
Other pulp	tons. Free	182	5,343	50	4,656	[2]559	[2]14,028	785	47,096

CHEMICALS AND OTHER PAPER MAKERS' MATERIALS.

Color lakes	lbs. Dut.	.....	.....	2,000	763	[2]16	[2]23	4,263	3,635
Indigo—									
Natural	lbs. Dut.	.....	.....	3,332	1,999	11,348	12,790	9,854	4,669
Synthetic	lbs. Dut.	.....	.....	.....	.....	72,218	101,448	631	458
Dyes, colors, stains, etc.	lbs. Dut.	772	730	1,815	1,973	[2]872	[2]1,482	13,721	18,084
Colors or dyes, n. e. s.	lbs. Dut.	.....	.....	.....	.....	[1]2,553,576	[1]3,762,841	.....	.....
Colors, dyes, stains, color acids and color bases, n. e. s.	lbs. Dut.	290,681	393,654	318,064	463,810	[2]528,513	[2]684,515	3,005,315	4,107,749
Imported from—									
Germany	lbs.	120,484	163,022	145,546	228,118	.....	.....	1,425,723	1,767,162
Switzerland	lbs.	119,751	168,729	83,175	129,142	.....	.....	819,478	1,278,645
United Kingdom	lbs.	13,714	12,847	6,813	5,876	.....	.....	96,034	96,641
Other countries	lbs.	36,732	49,056	82,530	100,674	.....	.....	664,080	965,301
Casein or lactarene	lbs. Free	.....	.....	.....	.....	[1]10,321,399	[1]853,276	.....	.....
	lbs. Dut.	734,397	84,734	1,036,784	140,770	[2]1,967,288	[2]240,321	24,927,249	4,231,368
Kaolin, china, and paper clay	tons. Dut.	26,508	266,779	13,845	135,585	245,749	2,654,534	261,281	2,870,372

[1] Jan. 1 to Sept. 21. [2] Beginning Sept. 22.

(*Continued on page* 48)

All Paper Men Should Read
the January Issue of

"DYESTUFFS"

BE sure you have this January number of "Dyestuffs"—the dye magazine published by the National Aniline & Chemical Company.

Be sure you read the special article on "The Coloring of Paper" by an authority on paper coloring. You will enjoy it. It discusses the many problems you encounter in paper coloring difficulties. It tells you about the wide range of dyes available for coloring paper.

If you are not on the mailing list to receive "Dyestuffs" each month, send us your name. Every issue contains a Paper Section devoted exclusively to the problems of the paper maker. Begin reading it with the January number. It's free to everyone interested in paper.

National Aniline & Chemical Company, Inc.
40 Rector Street, New York, N.Y.

Boston	Philadelphia	San Francisco
Providence	Chicago	Montreal
Hartford	Charlotte	Toronto

"NATIONAL" DYES
FOR PAPER

NATIONAL U.S.A. DYES

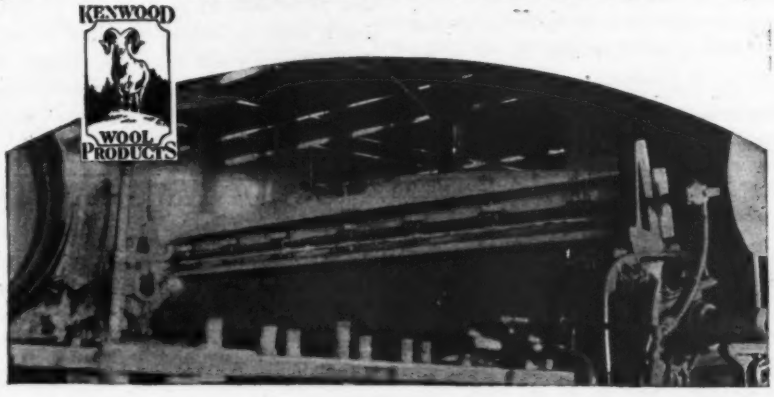
PAPER AND PAPER STOCKS IMPORTS AND EXPORTS OF THE UNITED STATES

(*Continued from page 46*)

Paper and Manufactures of	November 1922 Quantity	November 1922 Value	November 1923 Quantity	November 1923 Value	Eleven Months Ended November 30 1922 Quantity	Eleven Months Ended November 30 1922 Value	Eleven Months Ended November 30 1923 Quantity	Eleven Months Ended November 30 1923 Value
PULPWOOD.								
Rough ..... Cord.. Free	13,761	131,154	6,655	62,679	205,810	2,074,907	367,487	3,411,590
Peeled ..... Cord.. Free	40,309	399,807	49,632	478,364	640,220	6,592,341	815,347	8,041,590
Rossed ..... Cord.. Free	7,573	107,843	9,295	127,648	103,037	1,397,445	111,532	1,438,159
EXPORTS—PAPER.								
Paper, except printed matter (total)	.....	$2,012,689	.....	$1,926,607	.....	$21,882,246	.....	$23,491,478
Printing Paper—								
News Print Paper.....lbs.	2,442,630	125,322	2,623,878	129,383	47,415,107	2,140,817	28,934,580	1,460,074
Exported to—								
Canada	242,329	14,059	41,644	3,687	2,026,449	130,689	981,883	93,091
Central America.....	116,285	6,266	110,108	5,358	1,495,297	79,775	1,314,102	66,455
Cuba	1,198,972	54,603	1,386,385	60,519	17,354,444	716,966	17,586,969	803,914
Argentina	.....	.....	.....	.....	12,522,613	496,523	1,320	79
Other South America.....	380,947	22,614	109,150	5,270	4,543,108	221,429	1,757,298	91,486
China	109,552	3,900	.....	.....	1,557,069	63,647	54,862	4,521
Japan	.....	.....	360,668	23,478	2,649,646	160,380	1,046,679	68,816
Philippine Islands.....	246,975	11,640	465,325	23,825	3,271,494	149,949	4,186,580	206,189
Other countries.....	147,570	12,240	150,598	7,246	1,994,987	121,459	2,004,887	125,523
Book paper, not coated.....lbs.	2,728,058	266,225	1,830,792	204,060	26,174,743	2,524,600	24,771,589	2,794,898
Exported to—								
United Kingdom.....	105,110	17,619	63,606	13,913	536,195	112,477	578,114	128,464
Canada	173,913	23,433	102,402	14,176	2,331,401	260,208	2,117,014	275,614
Central America.....	33,495	3,642	106,557	14,090	358,387	39,314	826,864	95,723
Mexico	128,027	15,098	231,955	25,491	2,484,252	222,832	1,954,672	222,111
Cuba	581,109	49,357	354,274	38,905	5,028,043	476,529	6,641,877	710,099
Argentina	295,509	23,084	36,908	4,690	1,400,555	117,798	932,831	130,108
Brazil	69,583	7,016	6,854	1,420	1,418,875	154,971	809,211	90,953
Venezuela	58,341	4,787	20,526	1,932	673,150	72,588	312,860	43,937
Other South America	218,919	21,551	90,008	9,452	1,412,410	141,113	1,516,526	163,925
British India.....	359	57	3,040	348	216,303	24,043	216,834	24,505
China	79,394	15,908	496,978	42,988	2,021,765	183,137	2,436,773	251,734
Japan	318,681	26,634	31,588	4,304	3,516,677	263,797	1,942,332	182,283
Philippine Islands.....	567,089	47,123	157,489	13,782	2,735,878	251,566	2,871,706	264,093
Australia	51,886	5,199	48,621	8,434	878,488	86,568	844,762	108,811
Other countries.....	46,643	5,716	79,986	10,135	1,162,344	117,659	769,213	102,538
Cover paper .....lbs.	101,685	18,850	65,376	12,992	1,486,795	209,903	1,092,600	192,983
Greaseproof and waterproof paper.....lbs.	75,237	11,646	117,932	13,390	1,016,275	132,381	1,497,215	195,790
Wrapping paper—								
Kraft paper .....lbs.	71,728	6,468	121,871	10,201	730,265	60,105	779,433	70,781
Other wrapping .....lbs.	1,805,117	139,012	2,031,070	166,654	29,517,448	1,889,994	23,477,504	1,895,115
Writing paper, except papeteries.....lbs.	554,499	84,704	497,831	90,698	6,639,567	1,061,223	5,592,554	935,181
Surface-coated paper .....lbs.	269,757	43,980	295,453	45,316	3,307,598	503,759	3,710,516	566,841
Tissue and crêpe paper.....lbs.	253,185	62,493	371,902	88,985	2,370,251	622,017	3,071,660	772,724
Toilet paper .....lbs.	365,160	46,955	226,838	25,152	4,635,560	492,836	4,297,012	506,811
Paper towels and napkins.....lbs.	62,983	13,418	102,465	15,313	802,979	136,735	1,131,306	189,925
Bristols and bristol board.....lbs.	99,897	8,490	50,633	6,666	1,323,783	164,176	1,820,480	152,666
Paper board and straw board .....lbs.	3,441,843	171,527	2,964,030	146,999	44,835,120	1,890,713	50,764,102	2,423,810
Sheathing and building paper.....lbs.	681,275	23,747	437,170	19,789	5,518,228	201,437	3,343,004	156,850
Wall board of paper or pulp.....sq. ft.	1,496,670	43,071	1,692,064	66,252	10,410,247	367,703	14,202,434	531,132
Cigarette paper and books.....lbs.	47,148	17,577	18,645	6,420	701,247	269,106	467,767	157,345
Photographic paper .....lbs.	137,976	116,929	133,383	102,641	1,334,589	1,354,481	1,357,159	1,319,331
Paper hangings (wall paper).....yard	1,657,408	38,216	1,308,250	35,162	15,383,538	376,967	20,512,948	515,213
Paper bags .....lbs.	952,948	83,276	575,933	62,246	10,916,339	983,344	8,098,669	806,437
Boxes and cartons.....lbs.	706,690	76,941	767,667	84,286	8,449,625	705,245	10,165,495	978,151
Carbon paper .....lbs.	44,712	35,725	84,612	59,481	632,850	492,894	811,980	635,958
Envelopes .....lbs.	246,501	46,239	257,942	51,226	2,404,243	463,556	2,551,686	502,338
Playing cards .....packs	529,064	69,299	862,995	84,176	4,490,264	564,153	8,987,579	1,052,678
Cash-register and adding-machine paper.lbs.	91,976	9,519	111,920	13,293	809,580	88,353	1,063,136	116,272
Papeteries (writing paper in boxes)....lbs.	24,374	11,595	24,191	9,703	313,287	113,574	381,379	143,199
Other paper and paper products, n.e.s..lbs.	3,220,383	441,335	2,244,397	376,123	34,645,574	4,072,174	31,353,382	4,418,975
Books, maps, pictures and other printed matter (total) .....lbs.	3,577,901	1,496,681	4,498,072	1,772,818	41,341,989	15,316,165	45,750,594	16,435,953
Books and pamphlets.....lbs.	1,795,596	698,174	2,553,928	771,775	19,865,930	7,120,186	24,390,673	7,997,490
Maps and charts.....lbs.	19,724	13,146	9,344	9,790	117,958	155,538	165,769	150,506
Music in books or sheets.....lbs.	50,528	26,714	71,601	38,986	442,186	290,298	544,322	331,109
Souvenir post cards.....lbs.	19,604	13,575	22,504	15,859	926,212	193,459	584,754	207,504
Lithographically printed matter, except postcards and maps.....lbs.	174,721	122,214	187,803	168,964	1,612,259	1,133,377	1,881,554	1,390,744
Other printed matter.....lbs.	1,517,728	622,858	1,652,892	767,444	18,377,444	6,423,307	18,183,522	6,358,600
WOOD PULP AND PAPER STOCK.								
Sulphate wood pulp.....tons	1,170	63,253	1,269	74,104	15,191	740,104	13,577	791,106
Soda wood pulp.....tons	84	6,078	.....	.....	3,015	256,947	2,948	283,091
Other wood pulp .....tons	275	6,476	44	3,607	2,013	99,597	2,862	152,679
Rags and other paper stock.....lbs.	5,379,292	113,079	10,615,396	171,644	68,718,238	1,197,707	101,406,307	1,761,581
PAPER AND PULP MILL MACHINERY.								
Paper and pulp mill machinery.....lbs.	924,456	132,977	477,478	119,148	7,381,402	1,653,073	11,003,876	1,895,121

This Machine

—equipped with a Kenwood Guard Board, was running 750 feet per minute during a time exposure of 1¼ minutes—NOTE ABSENCE OF VIBRATION.



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Editorial

Vol. LXXVIII New York, February 14, 1924 No. 7

HENRY J. BERGER, Editor

SUPPORT FOR FOREST PRODUCTS LABORATORY

Since its inception the value of the work carried on at the U. S. Forest Products Laboratory, at Madison, Wis., is undisputed. Among the first projects undertaken the grinding of wood for mechanical pulp was especially valuable. To the knowledge gained from this study may reasonably be attributed in part at least the present development in making news print paper. It is well recognized that if the factors governing the quality in making ground wood pulp were not known, a speed of 1,000 feet per minute on the paper machine would not be possible.

The investigation of the causes and prevention of decay in mechanical pulp and pulpwood during storage was a contribution of direct practical value not only to the progressive manufacturers who financed the project but to the industry at large. Although the results of the study were made open to the public, those who benefited most largely were naturally the companies who supplied the money because of their monetary as well as personal interest in it.

In recent years the substitution of the barking drum for knife barkers for wood preparation has resulted in a saving of wood for pulp, amounting at a conservative figure, to 10 per cent. This method of conservation however resulted in a very evident waste in the form of wet bark and an expense for its disposal. During the past two years the Forest Products Laboratory, in cooperation with the Waste Committee of the Technical Association of the Pulp and Paper Industry has shown and mills have demonstrated that this barking drum refuse may be profitably utilized as fuel by pressing it to 50 per cent dry. The result is that mills which formerly hesitated to adopt the labor saving and wood saving barking drum on account of the refuse problem have had it solved for them.

In the more recent study of what is generally regarded as the major raw material utilization problem of the Northeastern United States and Eastern Canada, the Laboratory has made progress of immense potential value to the industry. The utilization of decayed pulpwood resulting from the attacks of insects such as the spruce budworm, the bark beetle and woodborers followed by decay by fungi of various kinds, is the problem which has lately been undertakeen. The preliminary report of progress which was made before the Canadian Woodlands Section recently in Montreal resulted in an appropriation of $2,000 being made as a contribution to the work in which two large Canadian mills are cooperating by furnishing the wood and conducting mill scale tests of the Laboratory results.

During the same meeting it is encouraging to note that the Canadian paper manufacturers appropriated $20,000 a year for five years for the Forest Products Laboratories of Canada, thereby to finance the study of their manufacturing and research problems.

At the present time in many of the States the advocates of measures to prevent stream polution are very active and in most cases their attention is directed to pulp and paper mills where the mill effluent is, of necessity perhaps, large in quantity. In the studies which the Laboratory has conducted in co-operation with the Waste Committee of the Technical Association it has been shown that in many cases the enforcement of such measures would result in financial benefit to manufacturers by the recovery of valuable materials now being wasted in the effluent. The reduction of white water losses will not only put money in the coffers of the mills but will relieve them from much of the adverse criticism of fishermen and conservation commissions.

The consistently practical work of the Forest Products Laboratory and its direct monetary value to the paper industry has warranted all the sentimental and practical support it has received. In view of the difficulty of getting an adequate government appropriation, it would be highly desirable if the paper manufacturers of the United States would follow the example of their Canadian friends and arrange to appropriate a similar modest sum of $20,000 a year for five years with which to carry the solution of some of the special problems of the paper industry, on which the Laboratory is now at work.

WHY 1924 OUTLOOK IS PROMISING

Team work on the part of capital and labor is all that is necessary to make 1924 the most wonderful year in our history believes John H. Jones, president of the Bertha Consumers' Company, which supplies coal to many of the large paper plants.

In a recent interview Mr. Jones expressed some very interesting views on labor, the coal situation and transportation problems. He said:

"Some classes of labor are being paid too highly as compared with others, but water always finds its level and the law of supply and demand will regulate wages as well as the price of all commodities. The higher the wages paid to labor the greater the buying power of labor. It is not a wise employer who is constantly hammering wages to the lowest point. After all is said, who is it that buys the products of our farms and industries? It is labor, and if labor is not paid good wages it cannot buy commodities at a fair price.

"Keep in mind that the fundamental conditions of our country are sound, that our merchants as a whole are not heavily stocked, that supply houses are not heavily stocked, and that we are buying from day to day, but doing a tremendous volume of business. In view of this it is easy to see that we are facing the greatest era of production we have yet witnessed, but the prices received for commodities will be based on the lowest cost production. It will require the greatest effort on the part of labor and industry to economize so that we may be able to compete, not only with ourselves but with the European countries, once conditions are stabilized abroad."

Coal shipments in 1923, Mr. Jones said, compare favorably with the three peak years of 1917, 1918, and 1920, the production of 1923 being approximately 540,000,000 tons, while the average production for the three peak years was approximately 557,000,000 tons per year. He pointed out that this shows 1923 to have been just about 17,000,000 tons short of the average yearly production during peak production periods.

"However," he said, "the production during 1923 will show an increase of about 115,000,000 tons above the average yearly production during the years of depression, namely, 1919, 1921 and 1922,

during which period the average production was approximately 425,000,000 tons per year.

"Every business man in this country, and every good citizen, should do everything possible to help the railroads by loading and unloading cars promptly. They should urge upon their representatives in Congress to give railroad legislation a rest—give the railroads opportunity to get on their feet. I have been in constant touch with railroad officials for more than 40 years and never in its history have we had better management of railroads than we have today. Give this management a chance. Don't continually nag them. Help them.

"Let us have more helpful legislation and less continued dragging on the wheels of industry by our legislators and statesmen. The buying power of our railroads at present is somewhat limited, while in most other lines it is free. If our political situation, as it affects the railroads, becomes stabilized, and investors show confidence in railroad securities, we should enjoy during the next two years the greatest era of prosperity we have ever witnessed."

Trying to Avoid Liquidation

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., February 12, 1924.—A cable from London states that the debenture and note holders in the huge paper concern of the Becker Wood Pulp Company, which had large interests in the Province of Quebec, in connection with the Chicoutimi Company, and which decided on December 31 last to go into voluntary liquidation, were told, by the official receiver that their main chance of recovering anything lay in the continuance of the Chicoutimi Company. It was admitted that the position of the Chicoutimi Company regarding working capital was critical, but it was stated that the management, in the face of grave difficulties, was doing everything possible to prevent liquidation, and was prepared to adopt a reasonable attitude towards the Becker Company claims. "The amount you will eventually receive is highly problematical," the official receiver of the Becker Company declared to the holders of debentures and notes. "The Becker failure is largely due to overtrading, followed by the usual consequences." Reference also was made to the enormous credits given by the Becker Company to associated companies with little chance of recovery.

Meanwhile, Senator F. L. Beique, the President of the Saguenay Paper Company, has given out a statement in Montreal explaining the point of view of the Canadian interests on whom Sir Frederick Becker threw blame for the condition of affairs which has been brought about. Senator Beique says that the Chicoutimi Company lost heavily through Becker & Co., Limited, not being able apparently to comply with the agreement between the parties under which pulp was sold f.o.b. Port Alfred, Que. He says: "Since July 1922, Becker & Co., Limited have always been indebted to the Chicoutimi Pulp Company, and their indebtedness now exceeds $1,000,000." He adds that he was at all times ready to discuss terms of settlement with Becker & Co. or their representatives but got no response from them, and in consequence in December last, he issued a printed letter addressed to the European customers of Chicoutimi giving detailed information on the relations of the Company with Becker & Co., Limited.

Coated Paper Co. Directors

MINERVA, Ohio, February 11, 1924.—The stockholders of the Coated Paper Products Company have elected the following directors: P. A. McCaskey, R. C. McCaskey, R. E. Remley, J. A. Grunder, A. Schnachtenberger, H. S. Olnhausen and A. F. Gluck. The sales and finance report submitted at the meeting was most satisfactory.

Low Water Causes Heavy Losses in Watertown

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., February 11, 1924.—The wage earners in the paper mills of the Black river valley lost $303,000, and the manufacturers' additional loss brought the total to over $1,000,000 as a result of low water conditions during 1923. This definite data has been compiled by E. S. Cullings, secretary to the Board of the Black River Regulation District, in a careful survey designed to determine the relation between a steady flow of the river and economic conditions in the valley.

The paper manufacturing business being the most directly effected by the river flow, Mr. Cullings undertook to obtain a full and accurate report from each manufacturer as to the number of days lost to employees during the year who were laid off on account of lack of power to operate. Those who might have been laid off for other reasons were not included. With slight exception a carefully compiled statement was received from each company. The totals disclosed that 75,000 working days had been lost, amounting to $303,000 in wages.

In commenting upon the situation Secretary Cullings said that the loss was reflected through the workmen to all business in the community. "It is safe to say that not less than 90 per cent of the pay roll of a mill is spent in the immediate locality for rent, supplies, etc.," he said, "and the entire community must feel the loss caused by the low water."

It is pointed out that the loss to the manufacturers is enormous in loss of business, idle plants and disorganized working forces, but the loss to the workman falls upon those who are least able to bear it. When the mill employee loses a month's wages his buying power has been weakened to an extent that can never be recovered.

This enormous loss in wages of employees and production for the manufacturers would have been saved in 1923 had the projected system of storage reservoirs on the head waters of the Black river been in operation. Last year was not exceptional, so it is only conjectural as to the enormous economic losses involved in the years gone before. Had the river regulating system been in operation the flow of the river could have been equalized to such an extent as to permit continuous operation of substantially all the mills in the Black river valley.

Secretary Cullings did not obtain similar records of losses in the mills on the Oswegatchie, Racquette, Grass and other rivers in this section, but it is estimated that they are proportionately great.

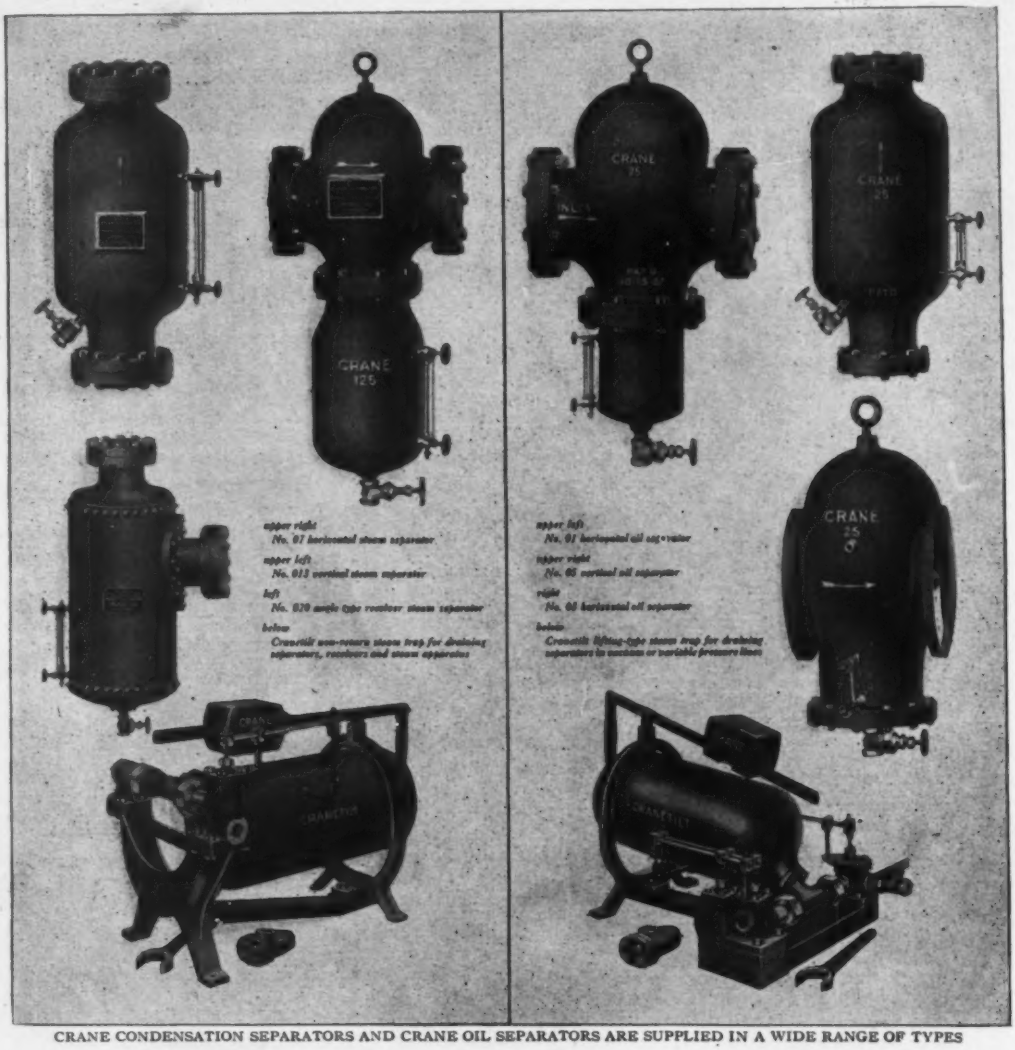
Give New Dam a Name

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., February 11, 1924.—Directors of the Wisconsin Valley Electric Company, at their annual meeting in Wausau, voted to name the new dam which the company is constructing near Merrill, "the Walter Alexander dam," in honor of Walter Alexander, a stockholder in the company since its inception and vice-president of the Marathon Paper Mills Company. Officers of the Wisconsin Valley Electric Company are: C. C. Yawkey, president; B. F. Wilson, vice-president; C. S. Gilbert, Sr., treasurer; Harold L. Giese, secretary and general manager. The directors are the officers and J. S. Alexander, G. D. Jones and A. L. Kreutzer.

Oji Paper Mfg. Co. Doing Business as Usual

The Oji Paper Manufacturing Company, Limited, whose general offices are now located in the Yusen Building, Tokyo, Japan, writes THE PAPER TRADE JOURNAL: "Our office building withstood the earthquake of September 1, 1923, but was destroyed by the fire that broke out in the neighborhood. There were no casualties and all important documents were saved. You will be pleased to know that we have been doing business as usual in our new quarters."



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Conducted by W. G. MacNAUGHTON, Secretary

DRYING PAPER

By Ogden Minton, Greenwich, Conn.

The method of drying paper, as practiced almost universally today, is practically that which was in use sixty years ago, except that modern machines are built with driers in greater number, of larger size, and because of the increased drying surface can be operated at higher speeds. The method may be briefly described as the passing of the paper taken from the last wet press of the papermaking machine over a series of internally steam heated drier rolls, being held tightly against the surface of such drier rolls by drier felts. The driers heat the paper and the water in the paper and cause it to evaporate. The surrounding air absorbs the water vapor and the vapor-laden air passes out of the machine room by means of ventilators.

Until very recently the actual phenomenon that takes place in the process of drying paper has not been thoroughly understood. It was at first assumed that the wet paper was always heated to a temperature of 212° F. before the water would boil out of the paper and be absorbed and carried away by the air. In the case of many of the very old machines this was very nearly what took place. However, of the more modern machines this is not true for reasons presently to be explained.

Concerning Evaporating Temperature

The assumption that the evaporating temperature of water from the paper at atmospheric pressure cannot be *over* 212° F. is true, because of the fact that 212° F. is the boiling point of water at this pressure. Water cannot exist as water, but will turn to vapor at any temperature over 212° F. at atmospheric pressure. If sufficient heat be applied to water in an open vessel at atmospheric pressure the temperature of the water will increase till it reaches 212° F., when boiling will take place. The temperature will then remain constant at 212° F. no matter how much additional heat is applied. The *rate* of evaporation will increase, but not the *temperature*. It is not true, however, that the evaporating temperature must always be the boiling point (212° F.) for it can be lower. In fact, in paper drying methods as employed today, it is usually lower. The evaporating temperature depends entirely on the vapor pressure.

One of the fundamental laws of thermodynamics covers this point thoroughly and has been stated as follows*:

"Vaporization from the surface of a liquid above which is the gas of another substance does not take place under the pressure of that gas, but under the pressure of any vapor of the evaporating liquid which may be present and be mixed with the gas. Thus water in a vessel open at the top will evaporate or vaporize in the same way and with the same absorption of heat and in the same quantity if it be exposed to still air or other similar gas, or be exposed to a space devoid of air or other gas. The pressure under which evaporation takes place is that of the water vapor in the space above the liquid, and if there happens to be air in the space the phenomenon of evaporation is not altered. For very exact physical work this statement must be modified to take account of certain variations introduced by very minute molecular attractions between different gases and vapors, but for the most exact engineering work the law may be stated: *Evaporation from the surface of a liquid in contact with a gas or gases with which the liquid or its vapor does not react chemically is independent of the presence of that gas.*

Finding Heat Values

Since the evaporation of the liquid takes place under pressure of that liquid, the latent heat of vaporization and similar quantities must correspond to that pressure. Such heat values can easily be found for any case when a vapor table for that particular substance is at hand, because, although it is generally difficult to measure the vapor pressures, they must correspond to the temperature of the space above the liquid. The vapor in that particular space must be saturated, because if superheated it would lose heat to the liquid as previously described. If saturated, its pressure must correspond to its temperature, and knowing the latter the former can be found from the vapor tables. Thus, water with its surface exposed to air at a temperature of t° F. will evaporate until the space above it contains as much water as it is capable of holding at that temperature; that is until the volume occupied by unit weight of the vapor corresponds to the value given in the vapor tables. The water vapor must have the same temperature as the air with which it is mixed, and must have the pressure corresponding to that temperature and also contain all heat in quantities corresponding to that temperature. To find heat necessary to cause evaporation of one pound under such conditions, the temperature of the space above the liquid must be found in the steam tables, and the corresponding heat of vaporization is the value sought.

The modern type of paper machine (i. e., the machine most commonly used, no attempt being made to include the loft drying process and other similar processes less commonly used) is covered with a hood that fits closely around the drier section and is connected with the roof by a tight-fitting duct. Blowers or exhausters are installed in the system to force large quantities of air, sometimes preheated, through the drier section.

*From Engineering Thermodynamics by C. F. Hirschfeld, published by D. Van Nostrand Company, N. Y., 1907.

The very old type paper machine was not equipped with means of passing air through the drier sections. Vapor coming from the paper on the drier rolls of the old type was very close to 212° F., but in the modern type this temperature is considerably lowered. Recent tests of modern paper machines show that this temperature is as low as 175° F., which means evaporation must take place at this or a lower temperature.

The Rate of Drying

In considering the drying of paper, care should be taken not to confuse the *rate* of drying with the *thermal efficiency*. The rate of drying will depend on the difference between the temperature of the steam inside the drier and the *evaporating temperature* of the water in the paper, assuming that the thickness of drier shells, the material of which they are made as well as their smoothness inside and outside, the oil film, and the quality and tension of felts, are the same in any two cases compared. And the *evaporating temperature* depends on the rapidity with which the water vapor is taken away when it forms. This water vapor may be taken away by means of air currents as in the modern machine described above, or by drying the paper in a vacuum chamber in which case the vapor goes to the condenser. The results of either method can be made identical. Thus if the evaporating temperature is lowered to 175° F. the rate of drying will correspond to drying under a vacuum of approximately 15.75 inches of mercury.

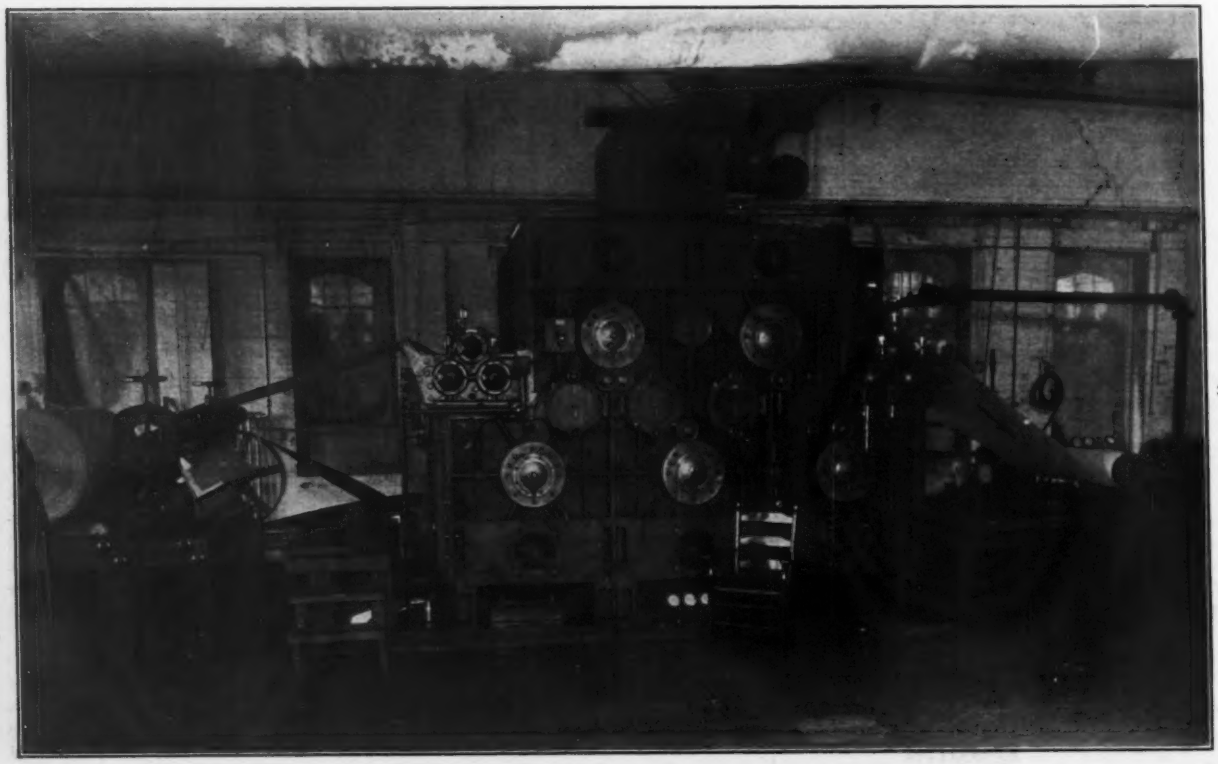
Of course to lower the evaporating temperature to 175° F. in the modern machine, it is necessary to pass a very large quantity of air through the drier section to absorb the water vapor. Air is only capable of absorbing a small amount of water vapor before it becomes saturated. In actual practice the air cannot be charged to even nearly 100 per cent saturation or condensation will take place as it leaves the drier section. This large quantity of air, in passing through the drier section, is heated and discharged through the ventilating system. Thus much heat is wasted in the modern method of drying paper.

Thermal Efficiency

The thermal efficiency of drying under the method using air for the discharge of vapor, falls off in some indefinite ratio to the quantity of air used. Just what this ratio is, cannot be told at the present time with the data now available. Recent tests of paper machines where the rate of drying is rapid show very low thermal efficiencies.

Consider this from another angle. To evaporate a certain amount of moisture a certain number of b.t.u.s must be applied. First the water in the paper must be raised to the temperature of evaporation, and sensible heat to this amount must be added. Then latent heat to change the heated water from water to vapor must be added. (The quantity can readily be calculated from the steam tables when the temperature of evaporation is known). The quantity of heat that will pass through a drier shell, all other things being equal, varies directly as the difference between the temperature inside and outside of the drier. Thus when the temperature of evaporation is lowered a greater temperature difference would be expected, and hence a greater transfer of heat from the steam through the drier shell with consequent more rapid drying. This is exactly what takes place. At the same time many heat units pass to the air that are only needed to keep it from becoming saturated before it is taken out of the machine room. In other words the method of removing the water vapor by means of air currents is wasteful of heat and the themal efficiency of this method must be low. As mentioned above recent tests have fully demonstrated this fact.

Because of the delicacy of wet paper and the speed with which it passes through the drier section, it is extremely difficult to get accurate temperatures of the water vapor leaving the sheet of paper.



FRONT VIEW MINTON VACUUM PAPER DRIER

TECHNICAL SECTION, PAGE 62

In fact this temperature varies. While the paper is in contact with the surface of one drier it is at one temperature and while passing from one drier to the other its temperature must change at least slightly. Various methods of taking such temperatures have been devised but there is reason to doubt their accuracy. For instance, it is not sufficient to take the temperature of the outside of the drier shell as the temperature of evaporation. Moreover taking the temperature of the outside of the drier shell is difficult and even when this temperature is taken by means of thermol-couples there is reason to doubt the accuracy. However, sufficiently accurate readings have been taken to demonstrate the method of drying paper outlined above and actual tests of the whole drying unit confirm this theory very closely.

Seeking Reliable Data

Much data is being collected by skilled engineers who have recently given this subject a great deal of thought and eventually reliable data will be obtained. The difficulties are great, however, and after the data is all at hand it is going to be quite a task to make assumptions from this data as to just what takes place. Such questions as, What happen to the sheet of paper passing from drier to drier? will have to be answered. Does water actually evaporate in the pass? If it does evaporate it must get its latent heat from somewhere to do so. Where does it get it? The temperature of the various driers increases as we approach the dry end, how then shall we get an average figure of evaporation? Many such questions can be asked and in the present state of the art it is quite impossible to answer these questions entirely satisfactorily.

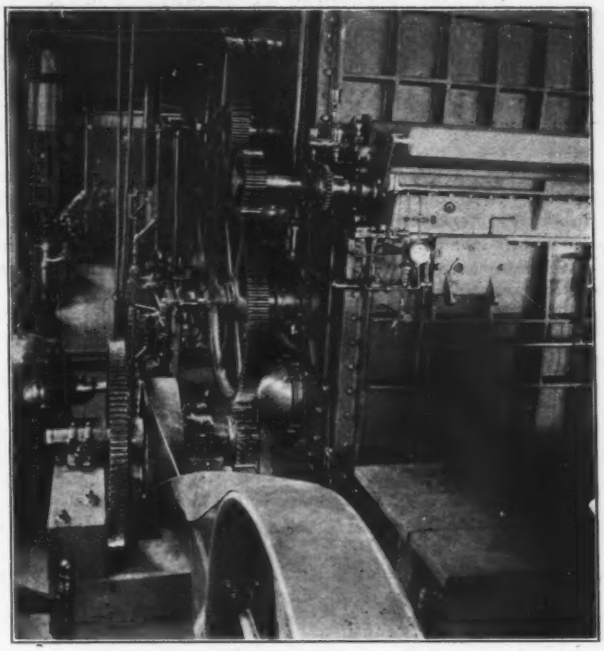
Some difficulty has been encountered in explaining the phenomenon of evaporation at temperatures under 212° F., but the following helps to an understanding. Under a vacuum of 28 inches of mercury for example, the steam tables indicate the temperature of evaporation to be practically 100° F. and the quantity of water in 1 cu. ft. of vapor to be 0.002851 lb. The humidity table indicates that 1 cu. ft. of free air at atmospheric pressure will at 100° F. hold just 0.002851 lb. of water. The two are equal. In other words the vapor pressure (the weight of water vapor per cubic foot) is the same in the vacuum as in the free air, and as we have previously shown, it is the vapor pressure that controls the drying or evaporation.

There is obviously a limit to which the temperature of evaporation can be lowered by means of absorption of the water vapor by air. Moreover, the lower this temperature is, the less economy will result from the drying operation because of the large quantity of air that absorbs heat as explained above. Again the entering air has to be sufficiently hot and sufficiently dry to be efficient in absorbing moisture. The ideal condition of course would be to have the entering air entirely free of moisture but this of course cannot be had. Also if the temperature of the entering air were above the temperature of evaporation the air would then give heat up to the paper and the drying rate would be still further increased but the economy would again be lessened, since a large quantity of heat would be absorbed in raising the temperature of the air.

Purposely, no attempt has been made to give actual figures in the above discussion. We feel that such figures in the present state of the art are not available with anywhere near the degree of accuracy necessary for mathematical calculations. It is felt that the drying of paper is a much more complicated process than heretofore considered and that such work is still to be done before accurate data will be available. Moreover, weather conditions, that vary from day to day, have a marked influence on the rate of drying and effect thermal efficiency. No two days are exactly alike.

Vacuum Paper Machine Drier

In his contact with the paper making industry the author has long been impressed with the possibility of making commercial application to the drying section of a paper making machine of the principle of drying paper under a high vacuum with attendant results such as low drying temperature, increased rate of drying, and economy of heat used for drying purposes. For several years he has accordingly been engaged in serious study and experimentation upon the problem, with the result that he has now developed and built a small size vacuum paper-machine drier that operates successfully and fully demonstrates on a commercial scale the entire feasibility of this method of drying paper. This vacuum paper-machine drier consists of five standard paper-machine drier rolls 66 in. face, and 36 in. diameter which are enclosed in a cast iron chamber. These five drier rolls are fitted with individual woolen drier felts with necessary carrying, guide and stretch rolls. The shafts pass through the cast iron chamber and are fitted with stuffing boxes to prevent air leaking into the chamber. Felt driers have also been included in the design. At the entrance and exit a special seal has been fitted which allows the paper to pass in and out but which prevents air from entering. The vacuum chamber is connected to a barometric type of condenser and a dry vacuum pump is connected to this condenser to take care of slight air leaks. With this combination a vacuum of 28 inches of mercury is maintained and paper containing 65 per cent of moisture is dried at a speed in excess of 215 feet per minute, a very high rate of speed considering the small number of driers.



Rear View Minton Vacuum Paper Drier

Drying paper in a vacuum is a simpler process than drying as practiced today, in consequence of which much more accurate data can be obtained. In a vacuum, the temperature of evaporation must be the temperature corresponding to the vapor pressure which is the amount of vacuum. Theoretically we have a saturated vapor surrounding the paper at the temperature and the pressure of the vacuum being used. Knowing the vacuum the temperature can be found from the steam tables. If the vacuum is 28 in. of mercury, the temperature of evaporation of the steam in the drier and the temperature of evaporation, all other factors being considered equal, such as condition and tension of drier felt, thickness of drier shell, oil or grease film on inside of drier, and surface of outside and inside of drier shell.

As to Vacuum Drying

In vacuum drying, the *rate* of drying and the thermal efficiency are absolutely independent of weather conditions since the paper is not dried in the presence of air but in a vacuum and at a temperature which is maintained constant regardless of the outside tem-

perature or humidity. Winter or summer, and dampness or dryness of weather are not factors in vacuum drying. As the wet paper enters the vacuum paper-machine drier it comes in contact with a heated drier and sensible heat is passed to the water in the paper thus raising its temperature to the evaporating temperature corresponding to the amount of vacuum being carried. The amount of sensible heat is small and in most cases the paper will reach the evaporating temperature before leaving the first or second drier. From this point on, the *rate* of evaporation will be constant on all driers. The paper in making the pass from one drier to the next will neither take on nor give off heat units, because the temperature of the vapor surrounding the paper in the pass will be the same as the temperature of evaporation. (The curve is shown in Fig. 1)

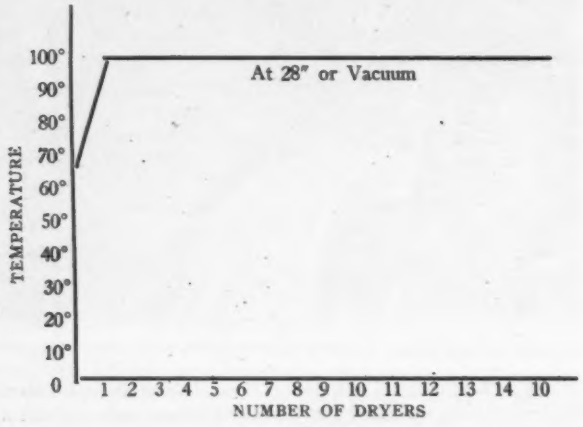


Fig. I.

With the vacuum machine it is possible to very precisely regulate the rate and amount of drying because not only can the steam pressure within the drier, but the amount of vacuum, can readily be changed. By increasing or decreasing the amount of vacuum the drying conditions are instantly changed and no delay is encountered in waiting for the drier shells to cool off or heat up as is the case in the present type of paper-machine driers. By means of a simple but effective device, the amount of vacuum can be automatically regulated to within 2/1000 of an inch. It is feasible to connect this control with another device whereby the moisture content of the paper leaving the drier will regulate the vacuum. Thus the papermaker may be relieved forever of the uncertainty of how wet or how dry his paper is going onto the reel, absolute uniformity of moisture being assured. This makes for a considerable saving as the news papermaker can leave just 10 per cent of moisture in his paper and get paid for it. As it is now the papermaker dries his paper something below 10 per cent as a margin of safety because of the fact that he can not control this moisture per cent very close as his drying is dependent upon weather conditions and also because his control of drying temperature is limited to his control of the steam pressure, which control has a very considerable lag.

Thermal Efficiency High

The thermal efficiency of vacuum drying must necessarily be high—almost 100 per cent. The driers being enclosed in a high vacuum (which acts similar to a thermos bottle) only give up heat to the paper which is in contact with them—no air is present to absorb and carry away heat units. If for instance a vacuum of 28 inches of mercury is carried the drying temperature or temperature of evaporation will be about 100° F. and the vapor given off will be at this same temperature. The vacuum case will therefore be at this temperature. If, as occasionally happens on a hot day in summer, the temperature of the air in the machine room should be over 100° F. the vacuum drier case would actually take a small amount of heat from the atmosphere of the room and the machine would be apparently over 100 per cent efficient.

The only heat loss in the operation of a vacuum paper-machine drier will be the radiation of heat from the cast iron case in which the driers are enclosed. The temperature of this case (when a 28 in. vacuum is carried) will not be over 100°F. with a machine room temperature of 75° F. The slight difference of 25° F. in temperature will cause little loss of heat. This loss will be further minimized by the application of a coating of 85 per cent Magnesia insulation 4 in. thick to the case of the machine.

Again, when using a vacuum of 28 in. the water going to the hot well of the condenser will be at approximately 90° F. and this warm water is available for use in the beater or in the flowbox of the paper machine instead of ice cold water which some of the northern mills have to use in winter. Practically all the heat units expended in the process of drying are thus brought back in this warm water. When this warm water can all be used the cost of heat for drying can be called zero.

A plan has been worked out whereby the white water from the machine or the saveall is used for condensing water which, in condensing the vapors from the paper-machine drier, is heated up and then returned to the beaters or the paper machine, or elsewhere as needed thus returning all of the heat expended in drying the paper.

Making Calculations

Considerable emphasis above has been put upon the fact that the *rate* of drying depends on the difference between the temperature of the steam inside the drier and the evaporating temperature of the water in the paper. In calculating the size and number of drier rolls this fact is important. If, in designing a new paper machine, the moisture content of the paper and the *rate* of evaporation of this moisture be known, the number and size of driers necessary can very readily be calculated. Also the theoretical number of heat units necessary to complete the drying process can be determined. In theory these figures, applicable to the vacuum process, can be arrived at with a good deal of accuracy but allowance must be made

TABLE NO. 1

No.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Steam pressure in drier (lb. per sq. in. gage)..	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
1.	Steam temp. in drier (° F.)	228	228	228	228	228	228	228	228	228	228	228	228	228	228	228
2.	Temp. of evaporation of water in paper (° F.).	212	201.96	193.22	182.86	176.85	170.06	162.28	153.01	141.52	126.15	101.83	100	90	80	70
3.	Difference of temp. = 1-2 (° F.).....	16	26.04	34.78	45.14	51.15	57.94	65.72	74.99	86.48	101.85	126.17	128	138	148	158
4.	Ratio (first difference considered at unit).....	Unit	1.63	2.17	2.82	3.19	3.63	4.11	4.66	5.34	6.34	7.89	8	8.61	9.25	9.89
5.	B.t.u. sensible heat to raise 1 lb. water from 65° F. to temp. of evaporation (2-65° F.).	147	136.96	128.22	117.86	111.85	105.06	97.28	88.01	76.52	61.15	36.83	35	25	15	5
6.	B.t.u. latent heat which has to be added to 1 lb. water to change same to vapor	970.4	976.60	982.0	988.2	991.8	995.8	1,000.3	1,005.7	1,012.3	1,021	1,034	1,035.6	1,041.2	1,046.7	1,052.3
7.	Total B.t.u. (= (5)-(6)) necessary for evaporation	1,117.4	1,113.56	1,110.22	1,106.06	1,103.65	1,100.86	1,097.58	1,093.71	1,088.55	1,082.15	1,070.83	1,070.6	1,066.2	1,061.7	1,057.3
8.	Corresponding vacuum (in. of Hg.).....	0	5.49	9.56	13.63	15.67	17.70	19.74	21.78	23.81	25.85	27.88	28	28.50	28.89	29.18

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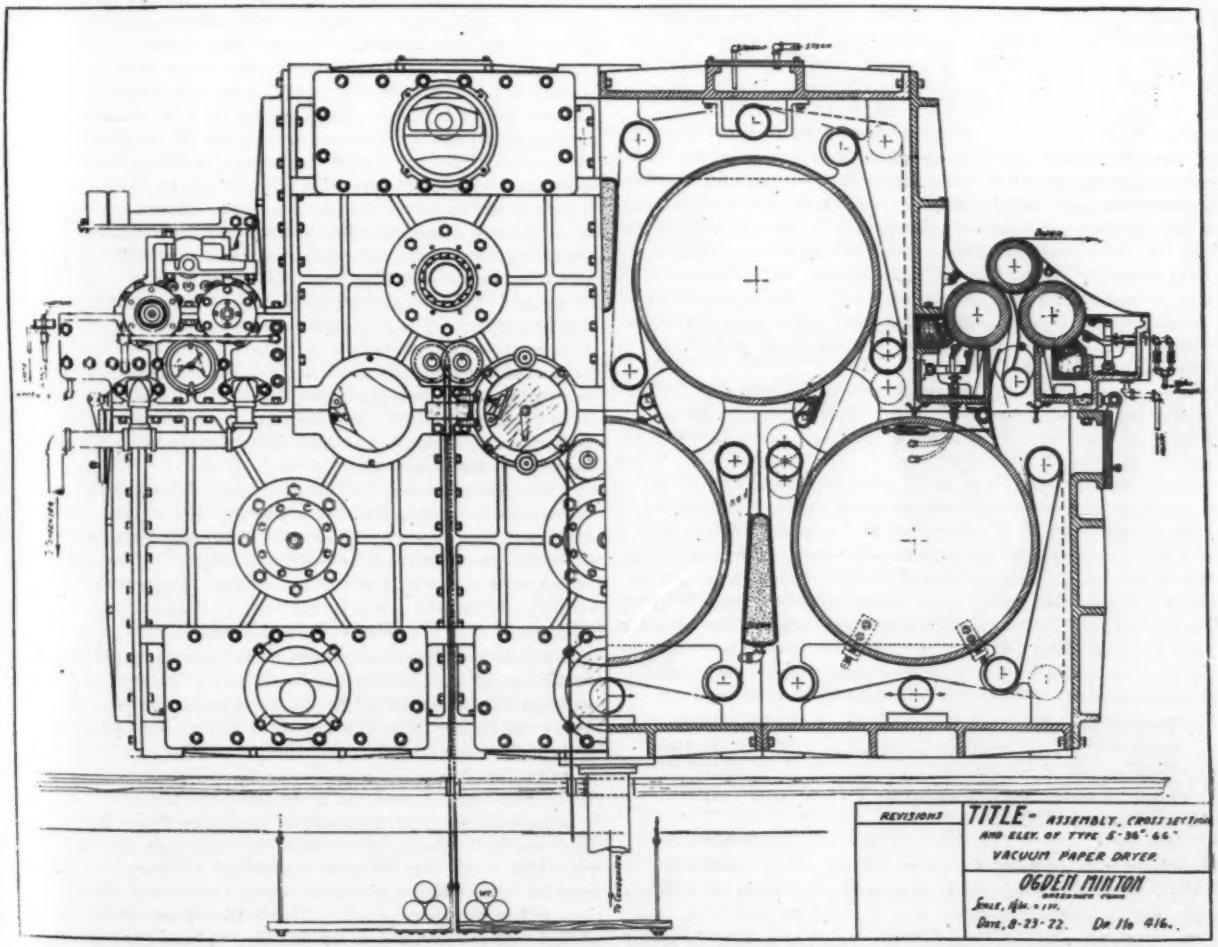
for such factors as the smoothness of the drier surface, quality, thickness and tension of felts, thickness and material of drier shells, and surface of inside and outside of drier. These factors, however, are the same as are met with in atmospheric drying. *Table No. 1* gives an approximate idea of the extent to which the rate of drying determines the size of the drying unit necessary. In this table, for sake of comparison, a steam pressure of 5.3 lb. gage pressure inside of the dryer has been assumed for all cases, 5.3 lb. being an average steam pressure used in actual practice today. In varying this pressure it is interesting to note the effect upon the rate of drying. This shows the extent of control a papermaker has over his rate of drying with the present standard paper machines. It is also interesting to change the figures given in this table on line No. 2 and calculate the additional control of drying that can be had with a vacuum paper-machine drier. These figures can be found in the steam table opposite any amount of vacuum that may be carried in the vacuum chamber; and it should be remembered that in the vacuum paper-machine driers the papermaker can select any vacuum within reasonable limits and have it automatically maintained constant for him as previously described.

Heat Units Decrease

Another significant fact to be noted from table No. 1 is that the total number of heat units (line No. 7) to dry the paper decreases as the temperature of evaporation (line No. 7) to dry the paper decreases as the temperature of evaporation (line No. 2) is reduced. True this is not any very great amount but nevertheless it is a real saving of heat units and thus of coal. Because of the negligible heat losses in the vacuum paper-machine drier the total heat units shown in line No. 7 table No. 1 actually represents the total heat required to evaporate 1 lb. of water under any given selected condition of vacuum. As previously explained, this is not true in the present day paper machine because in order to lower the temperature of evaporation the papermaker must pass a very large quantity of air through the bank of driers. This air absorbs heat units and the heat units so absorbed represent the loss in thermal efficiency, and the only such loss. By accelerating the rate of drying through the introduction of additional quantities of air to lower the temperature of evaporation, a direct falling off in thermal efficiency results. This is unfortunate, for except for this one fact there is a decided advantage to be gained by reducing this evaporating temperature.

It is conceded by almost all modern papermakers that a low drying temperature improves the quality of the paper in strength, degree of sizing, brightness of colors or tints and the ability of paper to age without turning a brown faded color when exposed to light for any long period of time. When paper is dried in a vacuum paper-machine drier under a vacuum of 26 in. of mercury the paper can never reach a temperature over 100° F. which temperature is little if any above the temperature of some of the hot days of sum-


REVISIONS
TITLE - ASSEMBLY, CROSS SECTION AND ELEV. OF TYPE S-36"-66" VACUUM PAPER DRYER.
OGDEN MINTON
Scale, 1/4in. = 1Ft.
Date, 8-23-22. Dr No 416.

SECTIONAL VIEW MINTON VACUUM PAPER DRIER

mer. The fibers of paper dried at this temperature are not scorched or burned. The low drying temperature will not turn the size on the paper to starch or fade delicate colors or tints. It is impossible with the data now available to say just how much stronger or better paper will be when dried at this low temperature, but in some cases the added strength and quality undoubtedly will be considerable. This is particularly true of paper made of the cheaper grades of stock such as groundwood. Thus the papermaker can use cheaper stock and make the same or a better quality of paper.

Number of Driers Required

The number and size of driers necessary to a drying machine in part also depends upon the percentage of water to be evaporated from the paper. In referring to this percentage, 70 per cent wet shall be taken to mean that the web contains 70 per cent water and 30 per cent of bone dry stock. Table No. 2 has been prepared

TABLE No. 2

Wet water	Bone dry stock	Water evaporated per lb. bone dry paper	Water evaporated per lb. 8% wet stock
%	%	Lb.	Lb.
75	25	3	2.68
74	26	2.85	2.55
73	27	2.70	2.404
72	28	2.57	2.294
71	29	2.45	2.174
70	30	2.33	2.07
69	31	2.23	1.972
68	32	2.12	1.871
67	33	2.03	1.788
66	34	1.94	1.7
65	35	1.86	1.625
64	36	1.78	1.556
63	37	1.70	1.484
62	38	1.63	1.422
61	39	1.56	1.36
60	40	1.50	1.30

to show the quantity of water necessary to be evaporated to produce one pound of paper both bone dry and 8 per cent wet. (Some papermakers work upon a bone dry stock basis and some upon an 8 per cent wet stock basis.) Incidentally it may be pointed out that this table shows the importance of having the wet presses perform properly. There is a certain percentage of wetness of stock that is most economical, considering cost of felts against cost of steam, but this is a percentage that each paper maker must determine for his own particular paper machine in the light of cost of felts and cost of steam.

From tests, the papermaker can determine the percentage of wetness of paper stock going to the drier. This percentage known, the amount of water to be evaporated to produce 8 per cent wet paper can be determined from table No. 2. For illustration let it be assumed that the paper stock is at a temperature of 65° F. and is 69 per cent wet (nearly an average for newsprint). Table No. 2 indicates that 1.976 lb. of water is to be evaporated for each pound of 8 per cent wet paper to be made under these conditions. Table No. 1, line No. 2, indicates the temperature of evaporation and line No. 7 the total number of b.t.u.s necessary to evaporate 1 lb. of water. This latter figure multiplied by the number of lbs. of water gives the total b.t.u.s necessary to produce 1 lb. of paper. Assuming the paper to be dried in a vacuum paper machine the calculation is as follows:

Temperature of wet stock .....65°
Vacuum .....28 in. Hg.
Temperature of evaporation.....100° F.
Total b.t.u.s necessary to evaporate 1 lb. of water....1070.6

Then from table No. 2:

Wetness .....69 per cent
Water to be evaporated.....1.976 lb.

Then 1070.6 × 1.976 = 2,116.50 b.t.u.s necessary to produce 1 lb. of 8 per cent wet paper.

The negligible amount of sensible heat necessary to raise the actual paper stock from 65° F. to 100° F. has been purposely disregarded.

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Each pound of steam at 5.3 lb. pressure contains 960.0 b.t.u.s of latent heat which is given up to drying paper.

Then $\frac{2.116.50}{960.0}$ = 2.203 lb. of steam at 5.3 lb. which is necessary to produce 1 lb. of 8 per cent wet paper with 100 per cent thermal efficiency.

Some Mill Data

A vacuum paper-machine drier will very nearly attain the results indicated by these calculations. One of the best known, best managed, and most modern newsprint mills in Canada is understood to use 3.25 lb. of steam per lb. of paper. Its steam costs $0.65 per 1,000 lb. The mill in question makes 100,000 tons of newspaper per year. This data affords the basis for an interesting calculation:

Steam used per lb. of paper.....3.25 lb.
If dried in a vacuum paper machine drier.
Steam used per lb. of paper.....2.203 lb. theoretical
Say .....2.25 lb. actual
Saving of steam per lb. of paper.....1.00 lb.

100,000 tons × 2,000 lb. steam = 200,000,000 lb. steam

$\frac{200,000,000}{1,000}$ × $0.65 = $130,000 per year saving in steam alone.

The vacuum paper-machine drier has other great advantages. Being entirely enclosed none of the moisture from the drying process is set free in the machine room but is conducted by a pipe to a condenser and condensed. This obviates the necessity for an expensive ventilating system. The machine room, even in summer, need not be hot, and the air may be but normal in moisture. As a result, present-day working conditions can be greatly improved. Also, from a study of "ratios" Table 1, line 4, it will be seen that a vacuum paper-machine drier operating under 28 in. vacuum (column 8) requires only one-eighth the number of driers required by a standard paper machine as indicated in column 1. Ratio of number of driers can be figured for any other cases desired. We have yet to find a case where the same amount of paper could not be dried on one-half the number of driers now being used. This means that the drier section of the paper machine will be never over one-half its present length and in some cases much shorter, and have the same drying capacity. This will save a great amount of floor space and in cases where the production of paper is limited by drying capacity, as is often the case, will allow of materially increased paper production without enlarging mill space. Also, the reduction in number of driers means that the distance from the wet end to the dry end will be greatly reduced, making it easier for the machine tenders to operate the paper machine.

Some papermakers claim that the engine driving the paper machine provides sufficient exhaust steam for drying their paper and it is unnecessary to use live steam for drying. This may be true, but with the vacuum drier they can install a more economical engine, of less power, yielding less exhaust steam, with very substantial savings.

Paper Passes Easily

It might upon first thought seem difficult to pass paper through a vacuum paper-machine drier but this is not the case. Because of the fact that there is no air in the vacuum machine there is nothing to deflect the paper. It will doctor off a drier much easier and will go straight when doctored off. The old physics experiment should be remembered in this connection, where the penny and the feather in the glass vacuum tube fall at the same speed.

Because of the reduced number of driers the design has been refined and ball bearings have been used throughout without unreasonable cost, thus reducing the power necessary to drive the machine. Also because of the low drying temperature the life of the felts will be greatly prolonged. This is also helped by the fact that all felt rolls are mounted on ball bearings and there is little drag on them. Woolen drier felts have been used which have a much longer

life than the standard dryer felts and give the paper a better finish. The finish is also improved still further in passing between the rubber and brass rolls of the ingoing and outgoing seals.

Condensing the vapors from the vacuum paper-machine drier presents no new or difficult problems. The equipment is identical with that used for condensing exhaust steam from any engine or turbine, and this is standard. Most paper mills have an abundant supply of water and, when this is true, an educator type of condenser can be used, through which it is merely necessary to pass cold water. This type of condenser can be made to eject a considerable amount of air, sufficient in most cases to offset any leaks in the drier and piping, without necessitating a dry vacuum pump. The type of condenser most suitable will depend on local conditions, depending on the availability of water, the head for inlet water, and the level at which the hot-well can conveniently be placed. The cost of condensers is small, they are simple in construction, and they require little attention to keep them running successfully.

The ball bearings of the vacuum paper-machine drier have been designed to take the standard alemite grease fittings. Filling all bearings with fresh grease (which need only be done once or twice a month), is a clean, simple process without waste that makes possible very great saving in cost over present methods. Housings for ball bearings are dowelled in place, as are all castings of the machine. Thus a new bearing can be quickly replaced and must of necessity go back in exactly the correct place, insuring perfectly aligned driers and rolls at all times. Doors and windows have been so arranged in the machine that access may be had to the inside to remove broke or to inspect or clean the interior. Plate glass windows 1 in. thick, 14 in. diam. in the casing of the machine and an electric light arrangement make paper traveling through the machine as well as the felts, plainly visible. The vapor leaving the paper is a true vapor and there is no fog to obstruct the vision. The process of drying can be observed to better advantage than in the atmospheric type of paper-machine drier.

Because of the perfect control of drying "snap offs" in the drier should rarely occur. Experience has shown that when a snap off does occur the break will usually feed on through the drier automatically. The gears on the back of the machine, which may be completely enclosed, will run truer and quieter than on present paper machines. Ball bearings keep the gears absolutely in line and on correct centers at all times, with consequent correct meshing of teeth.

Contrary to general opinion, a full vacuum (28 in. mercury) can be quickly obtained. The experimental machine consistently obtains this vacuum in less than three minutes. This time interval will be entirely dependent on the type and size of condenser and vacuum pump installed. All parts of the vacuum paper-machine drier subject to wear have been so designed that they may be quickly and accurately replaced, thereby reducing idleness and loss of production to a minimum. Replacing drier felts is not difficult nor does it involve great delay. In designing the machine, thought has been given to securing maximum safety of the operators. There are few delicate or small parts in this type of drier. The whole machine is rugged. Because of the heavy cast iron case vibration is so reduced it is possible to run it at speeds greatly in excess of present practice. Because of complete enclosure of the driers there is no dirt to contend with in making clean paper. A compensating mechanism has been designed that may be attached to the gears so that the speed of each drier may be compensated to allow for shrinkage of the paper in drying, which certain makers of very high grade papers feel is a decided advantage. Any type of device for removal of water from driers such as buckets, siphons, etc., as well as any system of traps for drips and any system of steam inlet to driers, may be used exactly as on present machines. Existing driers can be used and as a rule only slight alterations are necessary to adopt them for use in vacuum paper machine driers.

In the case of a vacuum paper-machine drier the original cost will be less than that of the present-day type of dryer unit of the same capacity, the economy will be greater, the floor space less, the upkeep less, and moreover a better grade of paper will be produced. These advantages are sufficient to warrant its installation in a replacement of present drying equipment for it will soon pay for itself and give the papermaker a handsome profit besides. The advisability of installing a vacuum paper-machine drier as part of any new paper machine is even more obvious.

From a Member in China

The attached letter was recently received from Mr. Zen Zuh Li, who was recently elected a junior members of the Association. Mr. Li is a graduate B. S. in chemical engineering, M. I. T., 1922. He served as chemist in the technical research laboratory of Eastern Manufacturing Company, Bangor, Me., in the latter part of 1922; was connected with American Writing Paper Company, Holyoke, Mass., for a short time in 1923, and also with Northern Paper Mills, Green Bay, Wis. His undergraduate thesis for M. I. T. was on "Paper Pulp from Chinese Bamboo by the Soda Process." He has recently returned to China where, as he states, he is connected with the Hwa Chang Cardboard Mill in the course of construction near Soochow, China.

"It may be of interest to you to hear that I have recently connected with the Hwa Chang Cardboard Mill which is now in the course of construction in the vicinity of Soochow and is due to operate by August. At present there are two strawboard mills operating in our country, one at Tientsin and another also at Soochow. Together with our mill, we expect to obtain a production of 60 to 80 tons daily from the three mills, which amount will be about enough to meet our country's demand for board. The Tientsin mill uses American machinery, the Soochow mill, Japanese, and our mill, German. It will be of interest to see which mill produces the best board and runs in the most efficient manner because this will indicate the comparative superiority of the different makers of board machines as well as the managements of the respective mills. I shall write you more about the Chinese paper industry after I have gathered enough information about the same."

Electric Steam Generator at Hudson Falls

A recent application of an electric steam generator is the installation of one of these units in the Hudson Falls, N. Y., plant of the Union Bag and Paper Corporation. This plant is devoted to the manufacture of paper, paper bags and other paper products, and the steam generator recently installed will furnish steam for heating purposes and process work throughout the plant.

The generator was built by the General Electric Company, is rated 5,000 kilowatt, 6,600 volt, 500 boiler horsepower, and is designed to generate steam at 100 pounds pressure. The generator operates in parallel with other fuel-fired boilers, but its operation is mostly confined to periods of high water and non-working days, when an excess of water is available for operating the power plant generators. In normal times, the fuel-fired boilers carry the steam load.

In the Hudson Falls plant the operating conditions are such that the steam demand is very constant and the generator, for this reason, is equipped only with hand control. This consists of a valve in the discharge side of the hot water circulating pump. This valve regulates the water level in the electrode chamber of the generator to such a height as to convert into steam whatever power is available up to the capacity of the generator.

The generator is located in the same room as the fuel-fired boilers and takes up a floor space of approximately six by ten feet, with a 24-foot headroom for the pump, shell and primary switchboard panel. The unit is operated by the same crew operating the fuel-fired boilers, no increase in boiler room force being necessary.

DEFINITION OF PAPER TERMS

Supplementary Report of the Committee on Definitions

PREPARED BY F. A. CURTIS, FORMERLY CHIEF PAPER SECTION, BUREAU OF STANDARDS, AND C. J. WEST, CHAIRMAN, COMMITTEE ON DEFINITIONS, NATIONAL RESEARCH COUNCIL, WASHINGTON, D. C.

(*Continued from last week*)

L

LAID ANTIQUE. This refers to an antique finish on a laid sheet. The formation of a paper may be either laid or wove, the laid depending on the sort of dandy roll used.

LAID WRITINGS. Fine flat writing papers of laid formation; usually in colors. *See* Laid.

LAMINATED STRAWBOARD. Straw paper built up to desired thickness by combining two or more sheets; same as pasted or air-dried strawboard.

LAMPSHADE PAPER. Heavy vegetable parchment or treated ledger paper, decorated and used as lampshades as a substitute for parchment.

LAUNDRY BAG. A bag, specially constructed for use in sending wash articles to the laundry; usually made of kraft or some strong sulphite wrapping paper.

LAUNDRY BOARD. A term applied to any kind of board, stiff enough to be used as bosom stiffeners in laundered shirts; also known as shirt boards; generally cut in sizes 8 by 16 and 9 by 18 inches.

LAWN. A finish imitating linen finish, applied by pressure to paper.

LAYER BOARD. A medium weight board, made of solid pulpboard or blanks; used for layers or dividers in cracker and cake boxes.

LAYER CARDS. *See* Layer board.

LEAD PENCIL PAPER. A strong sulphite manila wrapping slit to very narrow widths and used in the construction of paper pencils.

LEATHER BOARD—124. A kind of solid board, made from pulped scrap leather with or without jute, manila or paper clippings, on a wet machine; it is often called imitation leather.

LEATHERETTE COVER PAPER. A cover paper, embossed to have the appearance of leather; used for box covering and for covers of cheap notebooks.

LEDGERS—902. A kind of writing paper of medium to heavy substance, made on fourdrinier machine; hard-sized, either tub or engine or both; good erasing qualities; may be loft, air or machine dried. It carries medium finish; fibers are long, formation is open (slightly cloudy), not pebbled as in bond paper. Originally designed for use where durability is the primary essential, such as account books, court records, deeds and other legal forms and documents; now made in many grades, fairly true to type, to meet more general needs, particularly in commercial work, such as business and shop forms, stock account and blank books, etc.

LEGAL CAP. A size of paper 8½ by 14 inches. Also called Legal blank.

LENS PAPER. A tissue made of long fibers and used for wrapping and polishing lenses; tissue of Japanese fiber generally used.

LETTER FILES, PAPER. A box used for filing letters, generally made of pasted chip or binders board.

LETTER PAPER. Writing paper, cut to desired sizes for correspondence purposes.

LINED BOARDS. (a) Mill-lined refers to any board that is lined with news print, book paper, cover paper, etc., after the board is made on the board machine and while it is still in the roll, before being cut into sheets.

(b) Vat-lined is a term applied to any board made on a multi-cylinder machine, where the top or bottom liner or both are of different quality stock from the filler or center of the board; this term refers to a one-process sheet, the liner or liners being applied as the board is being made on the wet end of the machine.

(c) Sheet-lined refers to board that is lined, sheet by sheet, on a sheet lining machine; any board whatever can be sheet lined with any quality of lining paper selected.

LINED PAPER PLATES. Plates made of vat-lined chipboard.

LINEN BRIEF. A paper of foolscap size, ruled with 36 lines across the width of the paper and with a vertical marginal line.

LINEN FACED. A linen finished paper used as a facing sheet to a great extent in making boxes.

LINEN FINISH. A term indicating a finish resembling linen; produced by embossing, by plating with linen glued to zinc plates, or by interleaving linen and paper with zinc plates top and bottom of pile about 4 inches high; an embossed or plated finish.

LINEN LEDGER. A ledger paper of high grade, originally containing a large percentage of linen rags; now frequently contains a small percentage of linen rags, and in many cases made entirely of the best substitutes, first-class new cotton cuttings; great endurance, especially when folded; excellent erasure quality; extra hard-sized, both in engine and tub.

LINEN PAPER. *See* Linens.

LINENS—903. Originally a kind of writing paper of very light to medium substance; of long, flexible fibers; well distributed and interlaced (felted); produced on a hand mold of laid pattern, and imitating in marked degree the first paper made by the Chinese, which was later known in commerce as India paper; very hard-sized, for pen and ink use, as distinct from the use of the oriental brush; color usually natural or cream; probably derived its name "Linen" from the fact that linen rags afforded the most adaptable fibers for producing this imitation of India paper; highly preferred, before the advent of the typewriter, for commercial correspondence; adopted very largely for typewriting work during the first years, following the introduction of the typewriting machine; wove largely superseded laid, owing to better adaptability for typewriting; as paper making developed, new cotton rags were mixed with the linen of substituted, therefore, today, usually made on a fourdrinier machine, in many grades, running fairly true to type, from a great variety of papermaking fibers.

LINERS. The outside layers, i. e. the vat-lined or sheet-lined surface, of a built up or combination board.

LINING PAPER. A general term to designate a paper used for lining purposes; it may apply to news or book paper, sized specially for pasting or for lining strawboard for manufacture into boxes; may also be a wrapping, used as a lining for shipping cases or freight cars.

LINTERS. *See* Cotton linters.

LITHO BLANK. A cardboard, having a highly polished clay coated surface; used for color printing, posters, etc.; coating must take lithographing. *See* Coated blanks.

LITHOGRAPH BOOK PAPER. A soft-sized, carefully made book paper, with good finish for lithographic printing; made of rags, sulphite, soda, or pulp from old magazines; used for illustrations and color printing, often coated or super-calendered.

LITHOGRAPH LABEL PAPER. *See* Lithograph book paper. *See* label paper.

LITMUS PAPER. A chemical test paper, made by soaking filter paper in tincture of litmus; acids turn the paper red, alkalis turn it blue; three kinds made, red, blue and violet; the last being a neutral paper.

LOFT-DRIED PAPER. Paper which, having been immersed in a tub of a solution or emulsion made of animal hide cuttings, glue, starch, tapioca flour, Irish moss, or other vegetable substances, is while still wet, cut into sheets, which are hung or laid over poles in a loft, controlled for temperature and ventilation, thus drying without tension; subsequently seasoned and conditioned before finishing.

LOOK-THROUGH. A term applied to the appearance of a sheet of paper when held to the light; a poor "look-through" means a blotchy appearance or wild formation.

LOOSE LEAF PAPER. Bonds, flats and ledgers, used in sheet form, that may be added to or removed from books, binders, cabinets, etc.

LUMINOUS PAPER. Paper prepared by mixing a phosphorescent compound with the halfstuff or by coating the finished paper with such a mixture.

LUNCH-ROLLS. White sulphite or vegetable parchment, cut and wound into small rolls; used for wrapping sandwiches.

LUNCH SETS. White sulphite bond, cut into table cloths, napkins, doilies, etc.

M

MACARONI PAPER. A wrapping paper colored blue, used in connection with packages of macaroni; it contains sulphite or sulphate in whole or in part depending upon the strength required; it may or may not be machine finished.

MACHINE DRIED. A term applied to the process of drying paper, by passing it over internally heated iron rolls or cylinders of a papermachine; process differs from pole, loft or air drying in that the moist paper is in contact with the rolls or cylinders and is under considerable tension.

MACHINE FINISH. A term applied to a finish of paper, obtained by passing the paper through a paper machine calender stock; a finish higher than antique; also a term sometimes applied to paper with finish as it appears leaving the last dryer.

MACHINE FINISH BOOK PAPER—6113. Any uncoated book paper, having the surface finish obtained from the calender stock of a paper machine.

MACHINE FINISHED COVER PAPER—423. A kind of uncoated cover paper with a surface or finish, obtained by passing through the machine calender stack without other calendering or polishing.

MACHINE GLAZED. A term applied to wrapping or tissue papers made on a Yankee paper machine and dried upon one large steam heated revolving cylinder, which produces a highly glazed surface on the side next to the heated roller, leaving the other side in the same finished condition as it came from the wet end of the machine.

MACHINE MATRIX. A matrix mat, marked by rolling through a matrix machine; used in the molding of type for printing. *See* Matrix paper.

MAGAZINE PAPER. Various kinds, qualities and finishes of book paper suitable for printing and illustrating; used chiefly for magazine and periodical printing.

MAILING TUBES. Strawboard, or light-weight chipboard, wound to several thicknesses, sometimes spirally, to desired size and cut to various lengths; used for mailing purposes.

MANIFOLD BOOKS. Books made of light weight manifold or copying paper for duplicating purposes.

MANIFOLD PAPER—911. A kind of light-weight writing paper, which, when used alternately with carbon papers, produces multiple copies of written or typewritten work; unglazed or glazed finish.

MANIFOLD TISSUE. A tissue paper used for duplicating work when a large number of copies are to be made on the typewriter at one time. *See* Manifold paper.

MANILA. A general term originally used to indicate content of manila rope in the finish, in whole or in part; now descriptive of a color of paper or board; and does not refer to the the stock used; color similar to that of mechanical pulp.

MANILA BAG PAPER. A bag paper, either of rope, jute or sulphite pulp and of a manila color. *See* Manila wrapping.

MANILA BOARD—101. A kind of combination board, made of mechanical pulp and sulphite, old rope or bagging, which is either patent or clay coated.

MANILA DRAWING PAPER. Manila paper, of rough finish; possessing a "tooth" suitable for use with pencil for practice drawing purposes.

MANILA ENVELOPE PAPER. A manila paper of the wrapping paper type, possessing folding qualities and suitably finished for pen and ink.

MANILA LINED CHIPBOARD—1001. A combination chipboard, with a manila liner on one or both sides; the manila liner may be made of mechanical pulp, sulphite pulp, old rope or bagging.

MANILA LINED NEWSBOARD—1020. A combination newsboard vat-lined, one or both sides, with manila stock, made of sulphite or a mixture of sulphite and mechanical pulp.

MANILA LINED STRAWBOARD—1041. A combination strawboard, vat-lined one or both sides with manila pulp, made of sulphite or a mixture of sulphite and mechanical pulp.

MANILA TISSUE. A tissue made of rags, sulphite or mechanical pulp and given a manila color.

MANILA WRAPPING—81. A term applied to a group of manila-colored wrapping papers, made of sulphite, or a mixture of sulphite and mechanical pulp; used for various wrapping and printing purposes and also for envelopes, filing folders, etc.

MANILA WRITING PAPER. A paper originally made from hemp, the fiber of jute or manila; color bright buff or yellow, from full bleached stock (brown from unbleacheed); sizing hard; generally high machine finish varying to low or antique.

MANUSCRIPT COVER. A light weight cover paper; used for protecting legal papers and manuscripts; made of varying quantities of rope, soda and sulphite pulp.

MANUSCRIPT, MUSIC. A very high grade paper of the ledger or drafting type, smooth finish, extra hard sized; erasure superlative; ink must not spread when applied to erasure; used for writing musical scores with pen and ink.

MAP PAPER. A firm, closely-knit, hard-sized writing paper, light to medium substance capable of good register; finish generally high; made in many grades more or less true to type. *See* Chart paper.

MARBLE BOARD. Solid jute board; made of sulphite or sulphate pulp; grained to resemble marble; used for check book covers, etc.

MARBLE PAPER. A glazed paper, having a design printed upon it or by special process laying on a bath, giving the appearance of marble.

MAT BOARD. A combination board, lined with a plain or decorated cover; possesses rigidity; used for mounting specimens or articles.

MATCH BOARD. A two-ply board, made of mechanical pulp and sulphite, impregnated with chemicals and used in the manufacture of paper matches.

MATCH PAPER. A common colored tissue, used for covering match boxes.

MAT FACING PAPER. Paper used for covering mat boards, which see.

MATRIX. A heavy, unsized, unfinished paper, which when moistened and prepared, becomes elastic and, when forced over the printers' type form, takes its impression; this form is baked and used for making a metal plate for roll printing; used principally for large runs such as newspapers and various types of publications; may be a solid sheet or may be built up of matrix paper and sterotyping tissue with an adhesive mixture of formaldehyde, china clay, straw, flour, French chalk and gum arabic or similar mixture. *See* Matrix paper.

MATRIX PAPER—20. A bulky absorbent paper, used as the body in the production of a stereomatrix mat.

MECHANICAL PULP. Woodpulp produced by the rubbing action of revolving grindstones against short logs of wood; wood pressed side-

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wise against the stone by hydraulic pressure with the addition of more or less water.

MEDIO BOARD. The name given to a particular kind of bristol board used in a gelatine process of printing particularly applicable to an imitation of the regular photographic print.

MEDIUM. A size of paper, 18 by 23 inches.

MEDIUM FINISH. A finish that is neither high nor low—between super-calendered and antique; such as machine and English finish.

MEGAPHONES. Chipboard, heavy decument manila or hard fiber board formed into a conical shape.

MEMO COVER. Cover stock, especially made for memo, bank, and pass books.

MENU BOARD. See Ivory board.

METALLIC PAPER. Especially coated paper on which marks may be made with a metal point or stylus; used for note books and indicators diagrams; mixture of whiting, lime and zinc is used as coating, and then glazed.

M. F. *See* Machine finish.

M. G. *See* Machine glazed.

MIDDLES. A rough course board, made from mixed papers and mechanical pulp; used as a filler for cardboard. See Card middles.

MILK BOTTLES. *See* Bottles.

MILK BOTTLE CAPS. *See* Bottle caps.

MILL BLANKS. A one-process board, not coated, made on a multicylinder machine; two outer plies of white stock; inner plies of mechanical pulp, over-issue news or cheap waste material.

MILL BOARD. A board made of woodpulp or mixed papers; used for binding.

MILL BRISTOLS—32. A term applied to a group of bristols, made on a cylinder machine, by combining by pressure when moist, two or more layers; or made by pasting together two or more plies of the same or different kinds of paper.

MILL GLAZED. This term is rather ambiguous. However, it conveys the idea that the paper is finished on the calender stack rather than on the plater.

MILL LINED BOARD. Any board that is lined with newsprint, book or cover paper, before being cut into sheets. *See* Lined board.

MILL WRAPPING. A general term to designate grades of paper used by mills for wrapping purposes; grade depends on the quality of the contents and upon the custom of the mills.

(a) Heavy weight screenings for wrapping paper mill runs or large rolls and paper put up in bundles.

(b) Heavy sulphite wrappers, highly-finished, sometimes duplex in color; used for wrapping reams of fine writings, etc.

MIMEOGRAPH PAPER—613. A kind of slack-sized, semi-absorbent printing paper, with rough finish and generally laid water-marked; used for duplicating by means of a mimeograph machine; made of soda, sulphite and sometimes contains rags and clippings.

MITSCHERLICH PULP. Chemical woodpulp, cooked by the original sulphite process, where the heat is obtained from steam coils in the bottom rather than by the direct introduction of steam to the chips; a slow cooked pulp. *See* Sulphite pulp.

MIXED PAPERS. A cheap grade of waste paper or paper stock; collected from department stores, offices, schools, etc.; not sorted.

MONOTYPE PAPER. A white book paper, in small rolls; perforated with small circular holes; used on a monotype keyboard machine. Also called Keyboard paper.

MOTHBAG PAPER. A strong manila wrapping paper, often in red color; treated to prevent the presence of moths.

MOTHER OF PEARL. An effect on paper, obtained by the use of certain chemicals to produce iridescence.

MOTHPROOF BAGS. *See* Mothbag paper.

MOTTLED. A variegated effect on the surface of paper, produced by the introduction of a small amount of strongly colored fiber to stock of another color; used for fancy and decorative purposes.

MOULDMADE PAPER. Imitation handmade paper; sometimes made on a cylinder mould by dividing the surface with rubber bands to simulate the deckle edge of handmade paper.

MOUNTING BOARD. A cardboard made by pasting card middles together for the body of the board, which is then surface-lined with a good grade of box cover liner; has either a smooth surface both sides or a smooth surface one side and an art mat surface on the other.

M. PAPER. A term applied to paper that is not up to the first sorting, but in which the imperfections are trivial, perceptible only to the expert.

MULTIGRAPH PAPER. A general term applied to paper of various grades, colors and finishes that are suitable for use on a multigraph press.

MUNITION BOARD. See Ammunition paper.

MUSIC COVER. A heavy-weight book paper; used for the protection of sheet music; often a coated book or cover.

MUSIC NO. 1. A name applied to the high-grade music paper, but without any fixed standard.

MUSIC PAPER—614. A kind of medium weight printing paper, generally with English finish; made of soda and sulphite pulps used for printing of music; cheaper grades for popular sheet music contain mechanical pulp.

MUSICROLL PAPER. Jute manila or sulphite manila wrapping paper, that is reasonably resistant to contraction and expansion; used for music rolls for player pianos and organs.

MULCHING PAPER. Coarse wrapping paper used for mulching; paper made from bagasse often used for protection of growing sugar cane; stronger paper, made of bagasse (sugar cane waste) and burlap used for mulching pine apples; used to some extent, when perforated with holes, for protection of tomatoes and other vegetables; such paper is spread over the ground to keep down weeds to keep in moisture in dry climates and to force growth.

N

NAPKIN TISSUE—720. A kind of sanitary tissue, plain or creped, cut to napkin sizes; often decorated; made from bleached sulphite pulp.

NATURAL. A term sometimes applied to an India or light buff tint; refers to the color of bleached pulps without the addition of coloring matter in the beater.

NEAR-LEATHER PAPER. *See* Artificial leather.

NEEDLE PAPER. Black wrapping paper, especially prepared to insure freedom from acids to prevent tarnish; used for making small packages or containers to hold a dozen or more needles.

NEGATIVE PAPER. *See* Photographic paper.

NEWS. A general term applied to a class of papers, made largely from mechanical pulp, soft sized and machine finished and used as hangings or newsprint.

NEWSBOARD—102, 125. A term referring to a kind of cheap board, made on a multicylinder machine from printed news; may be combined or solid.

(a) Combination newsboard is a board, having a news base or center and lined on one or both sides with a higher grade of stock and possessing a smooth surface.

(b) Solid newsboard is a board made entirely from printed news, when a clean surface is desired, without the use of the liner.

(*To be continued*)

To Study Pulp Manufacture Abroad

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., February 11, 1924.—Henry A. Babcock, mill manager of the Interlake Pulp and Paper Company, division of the Consolidated Water Power and Paper Company, and Vance P. Edwardes, superintendent of the sulphite department, left Saturday for New York from where they will sail on February 16 for a several months visit in Europe to study the manufacture of pulp. They expect to visit in England, Germany, Belgium, France, Norway and Sweden.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

PAPER STANDARDIZATION BENEFITS PRINTERS*

The Paper Standardization Program of the Government Printing Office and the United Typothetæ Outlined by Experts

By E. O. Reed and Frank E. A. Larson

Note: As there seems to exist some misunderstanding about the purposes of the Typothetæ paper testing and standardization program, two experts now at work in the government printing office on paper tests have submitted to us this article for publication in the Bulletin. Mr. E. O. Reed is the chief of tests in the government printing office, while Mr. Frank E. A. Larson of the Research Department represents the U.T.A. at these tests.—Editor Typothetæ Bulletin.]

There has recently been so much published on the subject of standardization of paper in connection with the program of the government printing office and the United Typothetæ of America, that it is deemed advisable to issue a definite statement relative to this work, in order to prevent further misunderstanding.

Paper to the printer is like rag and pulp to the papermaker, his chief raw material, and just as the paper manufacturer has classified his rags into definite grades, knowing the quality of each and what can be produced from each, so must the printer classify his raw material. The printer is not interested in paper-making methods or practices, but only in paper as a finished mill product and its suitability for various purposes. Paper standardization to him means a plan which will effect economy and maximum efficiency in the use of paper in the printing industry as a whole.

Understanding of Paper Qualities

Increasing competition both among the printers and the paper makers requires a thorough understanding of paper qualities. At the present time there are no generally recognized standards of paper quality, each mill having set up standards of its own, those of one mill bearing no relation to those of any other. The natural result of this is confusion to the printer.

Investigation has developed that the correct use of paper has been generally disregarded by many of the large consumers of paper for printing. It has been found that forms or blanks of equal importance as records, subject to the same handling, are being printed on papers ranging from the highest grade of bond to a bogus wrapping. Not only is this an economic loss to both the printer and his customer, but it is also the cause of unfair competition among printers. To overcome this condition it is necessary that the printer be better acquainted with the qualities of the various papers on the market.

*Typothetae Bulletin.

Quality and Serviceability

As consumers of eighty per cent of the fine printing papers manufactured in the United States, the government printing office and the United Typothetæ of America are undertaking the work of testing, technically, all regularly stocked papers on the market in order to determine the factors which indicate the quality and serviceability of these papers and to classify these factors with respect to their appropriate use. Through the cooperation of the paper manufacturers these samples are being obtained and will be carefully tested microscopically, chemically, and physically. It is planned to make this investigation more thorough than any previous work of this kind.

All possible physical tests, such as tensile strength, folding endurance, bursting strength and tear resistance, will be made. It is fully appreciated that care and discretion must be exercised in rating the physical qualities of paper as determined by test, and that no one test can be relied upon to accomplish this. Nor can rag content be a sole basis for rating, since it is a well-known fact that rag-stock papers are not necessarily of the highest quality; some sulphite papers may be superior to certain rag-content papers. Great stress has been laid, in the past, on the fact that rag-stock papers are the only durable papers obtainable, and if of high-grade rags, properly treated, this is true. But when one considers the large number of grades of rags used in paper-making, and the treatment, both physical and chemical, necessary to render them suitable, it is evident that rag-content can be no absolute criterion. And it must also be remembered that there is the same wide variation in the quality of sulphite and chemical wood and in the papers made from these pulps.

To Arrange All Papers in Groups

As a result of this work it is planned to arrange all papers, starting with bonds, ledgers and index bristols, in a few large groups, the papers in each group having on the whole the same general characteristics. Color, finish and general appearance are distinctive mill characteristics, and no attempt will be made to classify these. The printer from his own experience already knows which papers are the most workable and economical in process, and can satisfy his trade as to appearance, but he lacks information as to other essential qualities. With a technical classification of paper the true value of a paper may be determined and a standard system of paper selection made possible.

ASSOCIATION COST WORK AND THE LAW

By Thomas J. Burke, C. A., Secy.-Treas. of the Cost Association of the Paper Industry.

At the Convention held by the National Association of Cost Accountants in Buffalo last September, I introduced the following motion:—

"The National Association of Cost Accountants, believing that a great stimulus would be given to the movement now on foot to promote the use of correct cost accounting methods by the members of trade associations generally, and that this movement will be beneficial in placing American industry on a sound economic basis, with resulting large benefits to the consuming public, wishes to go on record to the effect that it believes that the attention of Congress should be drawn to the necessity for some revision of the law as it is now applied to this feature of trade association work."

This after some discussion, was passed unanimously by the members of that Association, then in session, after I had accepted an amendment to the effect, that this resolution should be referred to the Board of Directors before definite action was taken thereon.

The Board of Directors met in October, and this resolution was laid before them. After considerable debate, it was moved and carried, that the President, J. P. Jordan, should appoint a Committee to prepare a memorial to be addressed to the proper government authority, covering the substance of my resolution and presenting the matter in greater detail. The President appointed: C. H. Scovell, F. L. Sweetser, C. R. Stevenson as a Special Committee to act under this resolution. These gentlemen are respectively, a practicing public accountant, the general manager of a manufacturing corporation, and an industrial engineer.

They have doubtless made a careful study of the subject, for under date of January 30, 1924, a circular letter has been sent out by the National Association of Cost Accountants, enclosing a copy of a resolution adopted by the Board of Directors, apparently as a result of this committee's work. The letter states, that a copy of this resolution has been placed in the hands of the President, Secretary of Commerce, the Attorney General, each Member of the Senate and each Member of the House of Representatives.

The Secretary of the N. A. C. A. states, that the Association has no immediate interest in this matter, except a firm conviction that the present position is inimical to the best interests of American Industry in general, and that reasonable freedom in the exchange of trade information would prove positively beneficial, if conducted in good faith within reasonable limits.

The resolution as finally adopted by the Board of Directors of the National Association of Cost Accountants, is as follows:—

WHEREAS the members of the National Association of Cost Accountants are generally so placed in industry that it is a part of their daily work to prepare or supervise the preparation of statistics of costs, production, shipments, sales, stocks on hand, and the like, not only for their own businesses but also for the trade associations with which their industries are connected, and

Whereas, it is the unanimous opinion of the directors of the N. A. C. A. that the collection, compilation and distribution of such statistics are aids to intelligent competition, and in no wise opposed to public interest, and

Whereas, the directors have taken note of the trend of recent court decisions and the recent opinion of Attorney-General Daugherty, given at the request of Secretary Hoover, that vital statistics of industries can be gathered only on the request and on the authority of a governmental agency, and distributed only through such an agency, and

Whereas, the directors believe that this trend is decidedly contrary to the spirit of American institutions, opposed to the best interest of American business, and particularly hurtful to the numerous small producers who can get information of this kind only through cooperative action (in contrast with the larger producers whose operations permit them to establish statistical bureaus on their own account), and

Whereas, the directors of the N. A. C. A. are thoroughly in accord with the opinion of Secretary Hoover, that the collection and use of accurate trade statistics will tend to diminish the shocks of industrial crisis and depression, and diminish the waste of capital which now occurs through ill-advised and uninformed business ventures, and

Whereas, the directors of the N. A. C. A. wish to record publicly their agreement with the opinion of Mr. Justice Holmes of the Supreme Court in the American Hardwood case when he says:

"I should have supposed that the Sherman Act did not set itself against knowledge—did not aim at a transitory cheapness unprofitable to the community as a whole because not corresponding to the actual conditions of the country. I should have thought that the ideal of commerce was an intelligent interchange made with full knowledge of the facts as a basis for a forecast of the future on both sides. A combination to get and distribute such knowledge, notwithstanding its tendency to equalize, not necessarily to raise, prices, is very far from a combination in unreasonable restraint of trade. . . . A combination in unreasonable restraint of trade imports an attempt to override normal market conditions. An attempt to conform to them seems to me the most reasonable thing in the world."

and also with opinion of Mr. Justice Brandeis in the American Hardwood case when he says:

"The Sherman Law does not prohibit the lessening of every competition; and it certainly does not command that competition shall be pursued blindly, that business rivals shall remain ignorant of trade facts, or be denied aid in weighing their significance. . . . Surely it is not against the public interest to distribute knowledge of trade facts, however detailed. . . . Intelligent conduct of business implies not only knowledge of trade facts, but an understanding of them. To this understanding editorial comment and free discussion by those engaged in the business and by others interested are aids. Opinions expressed may be unsound; predictions may be unfounded; but there is nothing in the Sherman Law which should limit freedom of discussion, even among traders."

and

Whereas, the directors of the National Association of Cost Accountants wish to record publicly their emphatic approval of Secretary Hoover's determined efforts to foster trade associations and to encourage the gathering, compilation and exchange of trade statistics, therefore

Be It Resolved that the board of directors of the National Association of Cost Accountants is of the opinion that the public interest would be served and encouragement given to aspects of American industrial activities which are sound economically and most valuable for social welfare, by such revision of the Federal laws as may be necessary to permit the compilation, tabulation and exchange of trade information under such public regulation as may be necessary to safeguard the public welfare, and

Further, that copies of this resolution be placed in the hands of the President of the United States, the Secretary of Commerce, the Attorney General of the United States, and both Houses of Congress with the request that earnest thought be given to the pressing need for relief along the lines indicated in this resolution and the preamble thereto.

Crescent Paper Co. in Bankruptcy

Rochester, N. Y., February 11, 1924.—Arthur G. Bitter, operating as the Crescent Paper Company of Buffalo, has filed a petition in bankruptcy today, with liabilities listed at $29,781, assets of $11,503 and secured claims of $22,537.

COST INFORMATION AND THE WORKER*

Lecturing before the Manchester Branch recently, H. G. Jenkins, F. C. W. A., drew attention to the change of view which post-war development of industry had revealed in the acknowledgment of the status of the workman as an essential factor of efficient production.

Co-operation of Workers

The long delay of this acknowledgment is a contributory cause to the hampered progress of industry, for while industrial management has always been ready to consult its bankers and to secure their co-operation, the fact that it is equally important to secure the co-operation of its workers has only been slowly realized. The phases of this co-operation are many, and some of them have been much expounded, but the necessity for the presentation of cost information to workers—which was the theme of the lecture—has not yet been recognized. On the contrary, there are still those who revolt even at the suggestion of such a course, believing it essential that no information should reach the factory beyond the necessary instructions for the performance of certain work. This last attitude of mind fails to appreciate an important human consideration. The average human requires some knowledge of the result he achieves by his labor. If an individual is to labor incessantly and never to know whether his work has borne fruit, is it any wonder that his task becomes monotonous, that his outlook is narrowed, and that he feels himself a machine without a soul? The suspicion and distrust engendered by this state of affairs is responsible for the loosely framed demand that Labor should have a control in the management of industry. Between this attitude of withholding information and the disaster of untrained minds gaining control of the industrial machine there is a middle course," and it is the fortunate lot of the cost accountant to be able to show the way to an improved relationship between management and workman. The cost accountant and his other technical colleagues have long been a section of industrial management which has been little understood by the men, but with the general advance in the standard of knowledge there is no room to doubt that as soon as there is an intelligent appreciation of the help that this section can render, not only to the business but to the general body of workers, there will be an immediate response by the men if demands are honest and the requirements able to be met.

Removing Distrust

With the consent of the management it is possible for the cost accountant to labor successfully in removing much of the distrust which exists, and to correct the tendencies to unsatisfying, monotonous toil. While repetition work cannot be relieved of its sameness, yet a knowledge of what has been achieved will at least add interest in bulk achievement, and this knowledge is essential to secure the co-operation of any man who, though tied to a particular part of a job, has spirit enough to feel that his freedom is not lost in the team work accomplished. Up to the present the tendency is to withhold this information, and to limit the interest of the worker to the extra rewards for piece-work or production bonus schemes.

The principal assumption in the past has been that the worker is unable to understand the intricacies of a Costing System. This assumption, Mr. Jenkins asserted, had its foundations in professionalism, for while it is quite possible that the worker cannot understand (and there is no reason why he should be expected to understand) a complicated mass of technically stated figures, there is no reason why these figures should be stated in a way which prevents the laymen from appreciating their part in the world's work.

Caution Warranted

This consideration alone is sufficient to warrant caution in the approach to presenting cost information to the worker, apart from the prevailing confusion consequent on manufacturers not having yet reached that standard of knowledge when standardization of Cost Accountancy can be accomplished. It will be well, therefore, to confine the workers' relationship to costing to those elements of cost in which he is vitally concerned, viz., materials and service. The last term will include various items of establishment charges, such as supervision and organization, which the worker sees around him but which often appear to him as superfluous, and which to his mind absorb a bigger proportion of total cost than they actually do.

In the case of materials, it is a strange individual indeed who is not more careful when the value of the goods used is realized, and a knowledge of this factor of costs will tend to check the contempt usually associated with familiarity. In the items of labor cost the worker has no knowledge of the value lost when an article is spoiled through neglect, neither does he know how far an excess of time on his part will affect the cost. The item of depreciation of machinery, is an unknown factor, as is the extra cost of idle time The cost of tools is gauged largely by the difficulty experienced in getting them issued, and how much is lost when they are damaged is not realized.

Must Be Followed by Practical Proposals

It is, however, of little use to furnish cost information to the worker in the abstract unless such presentation is followed by practical proposals for the cure of the ills exposed, and this consideration again emphasizes the distinguishing character of the cost accountant's work, as compared with that of the financial accountant, a comparison not of quality, but rather of suitability.

Progress in forms of visible records and display boards has been more rapid of later times, but the developments have been mainly on the lines of quantity of output. The graphical form of record is simple and its possibilities unlimited. With the will to take the worker into confidence and the ability to appreciate his view-point as well as to suggest practical remedies, the good that the Cost Accountant can achieve in dispelling suspicion and ill-will must bring with it a well-defined recognition of the importance of his work to industry.

*Editorial from "The Cost Accountant."

School Children Collect Waste Paper

HAMILTON, Ohio, February 11, 1924.—Children have learned a lesson in thrift; accompanying it was a lesson against waste.

This waste was paper, hidden in various parts of the cellar and attic and ready at the first opportunity to be thrown into the furnace where it would do the least good.

The schools needed some stereopticon paraphernalia, but were without money in the fund to buy.

Darrel Joyce, school superintendent, hit upon the rather novel idea of schools being in a contest to gather waste paper and sell it to the local mills—The Champion Coated Paper Company and the Beckett Paper Company. He thought it might be possible to get $200 or a little more possibly.

The contest was just completed. Pupils have made their last visits to homes of friends and names for waste paper. This is the result:

Sixty tons selling for about $1,800. Housewives have been able to get rid of useless and more or less dangerous waste and to have helped the schools.

During the contest several boys with nails in broomsticks picked up waste paper on streets to and from school.

There'll be another gathering up of waste paper in a month or two and probably regular trips later, because the schools have learned it's a good way to get money to buy some extra equipment without touching funds raised by taxation.

COST SECTION

CREDIT INSURANCE

By Thos. J. Burke, Secy.-Treas. Cost Association of the Paper Industry.

The necessity for insurance against fire has been thoroughly realized in the pulp and paper industry for many years past. Any industry. which deals with such inflammable materials as this industry, could not but appreciate the risk taken by any mill which did not insure adequately against this risk. There is however, another risk incurred in doing business in this industry, which is not so quickly recognized.

Although it is usual to set up a reserve for bad debts, experience has shown, that unless a settled policy has been adopted and carried out for a number of years, the government tax auditors usually object to any large reserve being set up for which the mill is not readily able to prove a loss. This is unfair, because often in an industry which sells such large quantities of its products, often times the one debtor's losses when they do occur, are very large, and under the government scheme, would have to be taken up in the year in which they occurred, perhaps with very detrimental results to the creditor. On this account, there would appear to be a very real reason why insurance against such risks commonly called "Credit Insurance," might be more widely adopted in the industry.

The main purpose of "Credit Insurance" is to keep the loss of the contract holder within a limited amount, technically known as the "initial loss," and to pay him any loss that he may sustain in excess of this "initial loss," up to the limit of the face value of the contract. Contracts are usually written for an amount sufficient to cover all possible contingencies, the underlying idea being that a concern can determine at the beginning of the contract year, the amount of possible losses it may sustain during the year, and to consider that amount in its overhead expense where it really belongs. They then insure for all losses and are covered beyond that point; therefore, may rest assured, that all excess losses will be taken care of by the Insurance Company.

As already stated, losses in this industry when incurred, are often large ones, no matter how careful the Credit Department may be in extending credit. It does not seem reasonable that very great care should be exercised in practicing economy in the mill operations, in fact throughout the organization, when the gain obtained by these economies plus a large surplus may be wiped out by two or three big losses. The industry has only recently had several instances of such losses, and the time seems ripe to bring to the attention of our members, the possibilities in "Credit Insurance."

Generally speaking, each contract for "Credit Insurance" varies from another. The lines of credit required are different, since some mills sell only to first credit ratings, while others will sell to first and second credit ratings. Again, some mills, because of the nature and extent of their business, require much larger coverage than others. This coverage is customarily based upon the ratings in recognized credit agencies, and is arranged according to the requirements of the various concerns which may be interested. The coverage, of course, means the amount of credit extended at any one time under the different ratings. Below is given a specimen sheet showing the information, usually asked for by an Insurance Company selling this kind of insurance, which is usually required for the previous five years:—

Name .....

Of .....

Business .....

Have been in business.....Years and are Manufacturers } .....
Jobbers }

Annual gross sales and shipments and net amount of insolvent debtors accounts were: .....

For the Year Ending	Gross Sales and Shipments	Total Net Amount of Insolvent Debtors' Accounts	Collected from Insurance Companies
December 31, 1919	$.....	$.....	$.....
December 31, 1920	$.....	$.....	$.....
December 31, 1921	$.....	$.....	$.....
December 31, 1922	$.....	$.....	$.....
December 31, 1923	$.....	$.....	$.....
During the fractional year to date...	$.....	$.....	$.....

If you carried "credit insurance" state amounts collected, if any.

Are you now carrying "credit insurance"?.....

Dated at.....

.....Day of.....19... Signed.....

In addition to this information, the company of course, requires that any mill desiring to take out "Credit Insurance," should state the coverage required on the various ratings determined upon by the credit agency. Copies of schedules customarily used are given below. Opposite the ratings the insurers are required to fill in the amount of credit usually extended at any one time under each rating. The Insurance Company then examines the schedules as well as the experience record, and then determines upon the amount, which is called the "initial loss," which is the amount that the insurer will be expected to bear, before calling upon the Insurance Company. Losses above this amount will be paid by the insurance company, in accordance with the schedule prepared by the insured. This appears to be a very reasonable manner in which to guard against what may readily be serious losses, and is brought to the attention of the industry by the Cost Association, at a time when the Association believes there is great need for such insurance.

All mills interested in this matter are asked to communicate with the Secretary of the Cost Association of the Paper Industry, from whom all further information may be obtained.

R. G. DUN & CO. MERCANTILE AGENCY—CAPITAL WITH CORRESPONDING FIRST AND SECOND CREDIT RATINGS

Capital Rating		First Credit Rating	Amount Covered	Second Credit Rating	Amount Covered	Capital Rating		First Credit Rating	Amount Covered	Second Credit Rating	Amount Covered
AA	$1,000,000	A1 $.....	.....	1 $.....	.....	F	$10,000	2½ $.....	.....	3 $.....	.....
A+	750,000	A1 $.....	.....	1 $.....	.....	G	5,000	3 $.....	.....	3½ $.....	.....
A	500,000	A1 $.....	.....	1 $.....	.....	H	3,000	3 $.....	.....	3½ $.....	.....
B+	300,000	1 $.....	.....	1½ $.....	.....	I	2,000	3 $.....	.....	3½ $.....	.....
B	200,000	1 $.....	.....	1½ $.....	.....	K	1,000	3 $.....	.....		
C+	125,000	1 $.....	.....	1½ $.....							
C	75,000	1½ $.....	.....	2 $.....							
D+	50,000	1½ $.....	.....	2 $.....							
D	35,000	1½ $.....	.....	2 $.....							
E	20,000	2 $.....	.....	2½ $.....							

BRADSTREET MERCANTILE AGENCY—CAPITAL WITH CORRESPONDING FIRST AND SECOND CREDIT RATINGS

Capital Rating		First Credit Rating	Amount Covered	Second Credit Rating	Amount Covered	Capital Rating		First Credit Rating	Amount Covered	Second Credit Rating	Amount Covered
G	$1,000,000	AA $.....	.....	A $.....	.....	R	$35,000	B $.....	.....	C $.....	.....
H	500,000	AA $.....	.....	A $.....	.....	S	20,000	C $.....	.....	D $.....	.....
I	400,000	A $.....	.....	B $.....	.....	T	10,000	C $.....	.....	D $.....	.....
K	300,000	A $.....	.....	B $.....	.....	U	5,000	C $.....	.....	D $.....	.....
L	250,000	A $.....	.....	B $.....	.....	V	3,000	D $.....	.....		
M	200,000	A $.....	.....	B $.....	.....	W	2,000	D $.....	.....		
N	150,000	A $.....	.....	B $.....	.....	X	1,000	D $.....	.....		
O	100,000	B $.....	.....	C $.....							
P	75,000	B $.....	.....	C $.....							
Q	50,000	B $.....	.....	C $.....							

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A purified Chrysoidine of excellent solubility.

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The accurate preparation of a Federal Income Tax Return calls for skilled accounting, thorough knowledge of the law, and an intimate acquaintance with Department rulings and Court decisions.

The neglect of those requirements has occasioned errors in the preparation of returns to an extent that is astonishing.

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The Paper Trade Journal

Covers completely the Paper and Pulp Industry.

It is a member of the Audit Bureau of Circulations, which means that our circulation claims are authentic and provable.

Obituary

Carroll M. Clark

INDIANAPOLIS, Ind., February 11, 1924.—Carroll M. Clark, who had been connected with the paper stock industry since 1916, died at the Methodist hospital in this city on February 8. He was born in Cincinnati, Ohio in 1887. Mr. Clark was General Manager of the National Paper Stock Company, Indianapolis; also the Toledo Paper Stock Company, Toledo, Ohio. He is survived by a mother, a son, two brothers and a sister. The funeral was held at 3 p. m., Monday at the Chapel at Spring Grove Cemetery, Cincinnati, Ohio.

Paper Man's Daughter Now a Princess

[FROM OUR REGULAR CORRESPONDENT.]

OTTAWA, February 11, 1924.—Canada has its first princess tonight, as the result of the wedding this afternoon of Miss Lois Booth, daughter of Mr. and Mrs. J. Fred Booth and granddaughter of J. R. Booth, Canada's ninety-seven-year-old multi-millionaire lumberman and paper manufacturer, to Prince Erik, of Denmark, in All Saints Church. Bishop Roper officiated before the most fashionable gathering of society ever assembled for a similar event in the Dominion of Canada.

While the marriage ceremonies were being enacted, messages and tokens came from the royalty of England and Denmark, and their Majesties King George and Queen Mary of England were officially represented at the wedding by their excellencies the Governor General and Lady Byng of Vimy, who were the only persons to attend in uniform. In a ceremony carried out with dignified simplicity, white lilies were the only church decorations, and the bride appeared in a simply designed gown and a lace veil that her mother had worn on her wedding day.

She wore a jeweled corsage ornament of rubies and diamonds, a gift from his royal highness, Prince Valdemar. She also wore a diamond bracelet, a gift from her father. The bride's gown was of white duchess satin, with court train, and was ornamented on the front panel with pearls in knot design, from which were suspended long strands of pearls.

Merchants' Asso iation Membership Campaign

It speaks well for the appreciation of the value of membership in the Merchants' Association that from the volume of merchants represented by paper dealers, paper manufacturers with offices in the city, stock dealers, envelopes, etc., that only 276 remain outside of the Association.

The Committee which the PAPER TRADE JOURNAL reported last week has been active in approaching these 276 and while it is too early to recount the success of this campaign yet the returns are coming in well.

Announcement was made today in the New York papers that the number of cases of typhoid fever had been reduced very materially in this city. For a number of years Arthur Hatch as Chairman of the Committee on Pollution has fought for a protected watershed. The readers of the daily news will remember the work of the Merchants' Association against the erection of a hospital for the insane on one of the nearby watersheds of the City. Undoubtedly this low typhoid fever result was due to the Association's work and whoever reads this notice, who is not yet a member, will send in his application and help this organization to make New York more healthy and more agreeable to live in than it is now.

Has Plant at Niagara Falls

The American Covering Manufacturing Company, Inc., of 336-360 Wayne street, Jersey City, N. J., is now operating its own paper mill at Niagara Falls, N. Y., in addition to its factory at Jersey City. The company recently acquired the plant at Niagara Falls originally owned by the Niagara Felt and Paper Company, from the Niagara Falls Power Company. The new owners on January 1, 1924, began operating a fully equipped and modern asbestos paper mill at this plant. A floor space of 15,000 square feet is now being used and there is space to extend the plant as occasion arises.

The Gibbs-Brower Company, paper and pulp mill brokers of New York and Chicago were instrumental in effecting the transaction and the power company was represented in the negotiations by Alexander D. Robb, assistant to the President.

On June 15, 1922, The American Covering Manufacturing Company, Inc., was founded with C. R. Burkhardt as president and general manager and P. H. Hilbig as treasurer and general sales manager, both of whom had been connected with the asbestos industry for many years. The beginning was a very modest one. With a factory floor space of 20,000 square feet, completely equipped with up-to-date machinery, this company has been producing asbestos air cell, wool felt and other insulating materials. By June 1, 1923, the business had expanded to such an extent that additional capital was required. This was secured and at the same time Walter J. Petschek became treasurer and credit manager.

Interstate Commerce Decisions

WASHINGTON, D. C., February 13, 1924.—A decision has been handed down by the Interstate Commerce Commission in case No. 12983 of the Crown Williamette Paper Company, against the Western Transportation Company and others, in which the Commission says, in part:

"Following Crown Williamette Paper Company vs. Director General, 78 I. C. C. 273, reparation awarded on shipments of wood pulp, in carloads, from Camas, Wash., to Floriston, Cal."

A decision has also been handed down by the Commission in case No. 14704 of the Jackson Paper Company, of Jackson, Miss., against the Alabama & Vicksburg Railway Company in which it was found that the rates on paper tablets, in carloads, from Birmingham, Ala., to Jackson "were not unreasonable, unjustly discriminatory, or unduly prejudicial. Complaint Dismissed."

Bankruptcy Trustee for L. P. Winchenbaugh

BOSTON, February 13, 1924.—George W. Hinckley, well-known insurance man of Oliver street, this city, has been elected trustee of the estate of Lester P. Winchenbaugh, paper dealer of Lincoln street, this city, who recently filed a voluntary petition in bankruptcy in the federal court here. Mr. Hinckley was elected trustee at a first meeting of the creditors of Winchenbaugh at a meeting of the bankruptcy court over which Referee Black presided. His election was approved by Referee Black.

Winchenbaugh's liabilities aggregated $217,134 and assets, $23,560. His principal unsecured creditor is the American Writing Paper Company of Holyoke whose claims total $207,975.

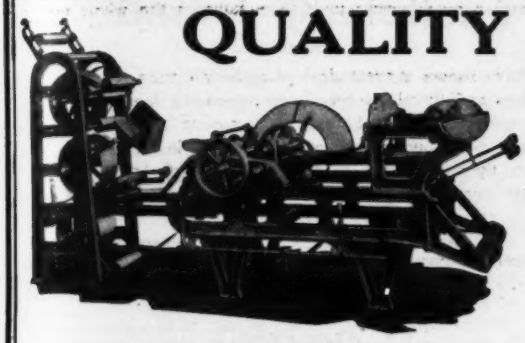
Roller Paper Co. Elects Officers

WILKES-BARRE, Penn., February 11, 1924.—At a meeting of the stockholders of the Roller Paper Company the following officers were elected: President and general manager, Charles E. Roller; vice president, W. D. Lewis; second vice president, Anthony Zoeller; treasurer, Patrick A. Duffy; secretary, W. H. Davis. E. J. Hildemeyer was elected a member of the board of directors.

Paper Co. is Expanding

LOS ANGELES, Cal., February 4, 1924.—The Pioneer Paper Company has authorized the expenditure of $50,000 for additional construction and equipment for its new $1,250,000 felt mill, asphalt refineries and roofing factory. The expenditure is for an extension of 50 by 100 feet in the beater room and for the installation of four new beaters, each to be operated by a 100 horsepower motor.

QUALITY *plus* PRODUCTION



MR. BAG MANUFACTURER: For quality and production every machine is guaranteed, so you take no risk.
The Superintendent of a large bag plant, unsolicited, writes: "All the machines used by this Company have been furnished by you. During my fifteen years in the bag line I have used your machines, and consider them the best square and flat bag machines on the market. I see no reason why the bag manufacturers should not be satisfied with your machines. The design of the Fischer machines and workmanship are A No. 1."
Let us quote you on your requirements of flat and square, as well as satchel bottom machines for making 1/16, ⅛ and ¼ barrel sizes.

FISCHER MACHINE CO.
310-316 N. Eleventh St., Philadelphia, Pa.

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HAFSLUND NORWAY — "HAFSLUND BEAR" Bleached Sulphite

F:HAGA — "FORSHAGA" Bleached Sulphite

KRAFT HURUM — "HURUM SPECIAL" Extra Strong Kraft

NORWAY SPECIAL

KOOS BAC — "BAMBLE" Extra Strong Kraft

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SMALL PAPER ROLLS

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ADDING MACHINE ROLLS, CASH REGISTER ROLLS, TICKER TAPE, CLOCK ROLLS, BLASTING, DIE WIPING, TIRE WRAP, BED WRAP, BACKING PAPER, MAILING MACHINE ROLLS

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Old Plates RECLOSED and RECUT to accurate gauge.

UNION BRONZE SCREWS for Screen Plates

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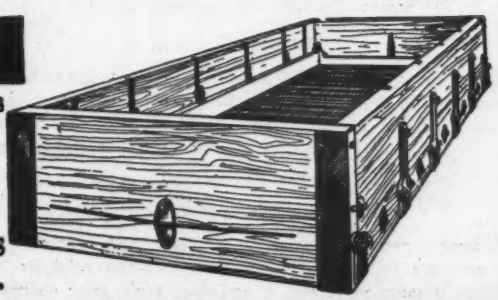

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, FEBRUARY 13, 1924.

A curious situation still exists in the paper market, which is showing every indication of rapid improvement. During the past week dealers in all of the grades say that they have seen definite signs of a return of strong buying, which is not surprising when one considers that economic authorities have been telling us for a long time that the consumption of paper has not fallen off any.

It seems strange that while this is true of paper the pulps should still continue to lag behind the general trend toward increased prosperity. Things have not changed a great deal although some of the quotations appear to be seeking their normal level.

Waste paper and rags have been having a good sale while pulp has been sagging. Much of the responsibility for this condition rests with the importers and indirectly the Scandinavian mills. They started the market down some time ago by selling at a figure a great deal lower than the manufacturers in this country could do and still make a profit. One mill found that it was cheaper to buy foreign kraft pulp and ship it several hundred miles inland than to purchase the domestic article.

The foreign ports are mostly closed for the winter this large importation of pulps has ceased and there seems to be every reason to believe that the domestic manufacturers are going to come into their own again. This will mean a stiffening or at any rate a greater steadiness of prices and with other raw materials travelling upward the buyers may find that they are left behind. In the finished paper end of the business there has been little change.

News print is still leading the market and the fact that ground wood has gone down some in the last two weeks does not seem to indicate any slackness among news mills. It seems to be due rather to stiff competition.

Fine papers are still jogging along at about the same rate that they have been since the beginning of the New Year with little indication that there is going to be any change for some little time yet. Prices remain fairly firm and trading in the open market has grown neither greater nor less to change them.

Coarse papers also are unchanged with a fairly good demand keeping manufacturers and dealers in an optimistic frame of mind. They say that the demand is not yet quite as good as they had hoped, but that there is every reason to believe that it is due for a pickup within a few weeks since the ultimate consumer is using just as much of these grades as ever.

Tissue is also in about the same condition as it has been for the past few weeks. The price on all of the grades remains just about the same with apparently no changes in either one direction or the other.

Board is also just running along on a fairly even keel. Manufacturers say that they are succeeding in disposing of their production with fairly satisfactory speed and prices are at just about the same level as they have been for some time with the exception of the usual minor alterations which often occur in board, but which do not necessarily make the market.

Mechanical Pulp

Changes in ground wood have been only trifling during the past week. The price remains fairly firm at the low level of thirty-two dollars a ton, although some lots have been sold in isolated cases for less than this where dealers or manufacturers seem to be anxious to get rid of their production.

Chemical Pulp

The same is true of chemical pulp. There have been some downward revisions of quotations particularly in the sulphites but on the whole it looks as though a period of rapid price change were drawing to a close. Dealers report that the demand has improved a little and a much firmer undertone pervades the whole market.

Rags

Rags have shown a great deal of activity during the past week or ten days and there has been a corresponding increase all along the line particularly in old rags and roofing stock. While the higher grades have not grown more expensive in the same ratio as the others they have been following along pretty steadily with a consequent increase in quotations.

Old Rope and Bagging

Old rope is in considerably better demand with a higher price on most of the grades. The same is true of bagging which has also jumped.

Waste Paper

Dealers in waste paper report an excellent business with all grades bringing higher prices.

To Have New Beloit Fourdrinier

[FROM OUR REGULAR CORRESPONDENT.]

DETROIT, Mich., February 11, 1924.—The Beloit Iron Works of Beloit, Wis., is building a new Yankee Fourdrinier for the Detroit Sulphite Pulp and Paper Company which will contain all the new Beloit features and will embody many progressive ideas of the Detroit organization.

The new machine will have a new Beloit Removable Fourdrinier part which permits a new wire to be installed in about forty minutes without any back breaking work and requiring only the regular crew of operators to perform the operation. It will have the new Beloit shake, ball bearings on the breast roll, table roll and wire rolls, also on the felt rolls, all enclosed in water proof bearings. There will be one press with automatic means for taking the sheet off the couch and delivering it to the dryer. The felts will be continuously washed. The single Yankee dryer will be 12 inches in diameter; the driving train is a new development which eliminates gears and clutches and all bearings on the driving train will be S. K. F. bearings.

The press rolls and the big dryer will be mounted in new design bearings which are oil tight and water proof. The reel will be the Beloit 2-drum revolving type especially designed for fine tissue paper, having large drums 5 inches in diameter and so constructed as to permit unwinding from the loaded reel drums or cutting the paper off in large sheets. The winder will be the Beloit 2-drum type for winding small and large rolls at the end of the machine. The winder will be driven by an individual motor and the slitters with a separate direct connected motor. The paper rolls and slitter shaft will be in S. K. F. bearings. The main drive of the machine will be either a variable speed motor or a high efficiency turbine. The machine is designed to run as high as 700 inches per minute and there are many other improvements.

The product of the machine will be the famous Detroit quality made from slow cook Mitscherlich pulp. The concern enjoys the reputation of making the very finest quality tissue paper which is required for the finest grades of crepe paper. They will also make high grade waxing papers and other fine tissue.

Max Boehm With Peshtigo Co.

[FROM OUR REGULAR CORRESPONDENT.]

PORT HURON, Mich., February 11, 1924.—Max E. Boehm, formerly of the Marathon Paper Mills and, for the last two years, Sulphite Superintendent of the Port Huron Sulphite and Paper Company, has taken a position with the Peshtigo Paper Company at Peshtigo, Wis. At the time of his departure from Port Huron, Mr. Boehm was presented with a handsome travelling bag by the foremen and superintendents of the mill.

Market Quotations

Paper Stock Securities

New York Stock Exchange closing quotations February 11, 1924

	BID	ASKED
American Writing Paper Company, pref.	2½	2⅞
International Paper Company, com.	40¾	41¼
International Paper Company, pref. stamped	65¾	67
Union Bag & Paper Corporation	63¾	64½

Paper

F. o. b. Mill		
Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@30.00
Superfine	14.00	@30.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—f. o. b. Mill—		
Rolls, contract	3.75	@ 4.00
Rolls, transit	3.75	@ 4.25
Sheets	4.25	@ 4.50
Side runs	3.50	@ 4.15
Book, Cased—f. o. b. Mill—		
S. & S. C.	7.25	@ 9.00
M. F.	7.00	@ 8.75
Coated and Enamel	9.00	@14.00
Lithograph	9.00	@14.00
Tissues—f. o. b. Mill—		
White No. 1	.80	@ .90
White No. 2	.85	@ .95
Colored	1.15	@ 2.00
Anti-Tarnish	1.50	@ 2.00
Kraft	.95	@ 1.15
Manila	.78	@ .85
Kraft—f. o. b. Mill—		
No. 1 Domestic	5.85	@ 6.20
No. 2 Domestic	5.15	@ 5.75
Imported	4.65	@ 5.20
Manila—		
No. 1 Jute	7.50	@ 9.00
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	4.25	@ 4.75
Fibre Papers—		
No. 1 Fibre	5.50	@ 5.75
No. 2 Fibre	5.00	@ 5.25
Common Bogus	3.50	@ —
S. Screening	3.25	@ 3.75
Card Middles	4.00	@ 5.00
Boards—per ton—		
News	55.00	@60.00
Straw	61.00	@63.00
Chip	50.00	@55.00
Binders' Boards	70.00	@75.00
Sgl. Mla. Ll. Chip	65.00	@75.00
Wood Pulp	70.00	@75.00
Container	70.00	@80.00
Sulphate Screenings—		
Coarse	.80	@ .90
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	12.00	@15.00
Bleached, basis 20 lbs.	14.00	@17.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported	32.00	@35.00

(F. o. b. Mill)

No. 1 Domestic	32.00	@35.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.95	@ 4.10
Easy Bleaching	2.90	@ 3.10
No. 1 strong unbleached	3.05	@ 3.15
No. 2 strong unbleached	2.40	@ 2.60
No. 1 Kraft	2.85	@ 3.05
Sulphate—		
Bleached	3.90	@ 4.00

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.90	@ 4.20
Easy Bleaching Sulphite	2.90	@ 3.05
News Sulphite	2.50	@ 2.90
Mitscherlich	2.90	@ 3.00
Kraft (Domestic)	2.65	@ 2.90
Soda Bleached	4.00	@ 4.20

Domestic Rags

New

Prices to Mill, f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	13.00	@13.50
New White, No. 2	6.25	@ 6.75
Silesias, No. 1	7.25	@ 7.75
New Unbleached	10.50	@11.00
Washables	5.26	@ 6.15
Fancy	6.25	@ 6.75
Blue Overall	7.15	@ 8.15
New Blue	5.00	@ 5.50
New Black Soft	4.65	@ 5.15
New Light Seconds	2.75	@ 3.00
O. D. Khaki Cuttings	4.04	@ 4.15
Men's Corduroy	3.65	@ 4.00
New Canvas	6.40	@ 7.00
New Black Mixed	2.50	@ 2.75
White, No. 1—		
Repacked	6.25	@ 6.75
Miscellaneous	5.50	@ 5.75
White, No. 2—		
Repacked	4.00	@ 4.25
Miscellaneous	3.50	@ 3.65
St. Soiled, White	2.80	@ 3.00
Thirds and Blues—		
Repacked	3.00	@ 3.25
Miscellaneous	2.35	@ 2.45
Black Stockings	3.00	@ 3.25
Roofing Rags—		
Cloth Strippings	2.30	@ 2.40
No. 1	2.05	@ 2.15
No. 2	1.25	@ 1.35
No. 3	1.20	@ 1.30
No. 4	1.20	@ 1.30
No. 5A	1.50	@ 1.60

Foreign Rags

New Light Silesias	7.00	@ 7.75
Light Flannelettes	8.00	@ 8.25
Unbl'chd Cottons	9.00	@ 9.50
New White Cuttings	10.50	@11.50
New Light Oxfords	7.25	@ 7.75
New Light Prints	6.75	@ 7.25
New Mixed Cuttings	2.50	@ 2.75
New Dark Cuttings	2.00	@ 2.25
No. 1 White Linens	9.00	@10.00
No. 2 White Linens	7.00	@ 8.00
No. 3 White Linens	6.00	@ 6.50
No. 4 White Linens	4.00	@ 5.00
Old Extra Light Prints	3.15	@ 3.25
Ord. Light Prints	2.75	@ 3.00
Med. Light Prints	2.40	@ 2.50
Dutch Blue Cotton	3.25	@ 3.50
German Blue Cottons	3.00	@ 3.20
Ger. Blue Linens	3.00	@ 3.25
Checks and Blues	2.00	@ 2.15
Dark Cottons	2.00	@ 2.10
Shoppery	1.75	@ 1.85
French Blues	3.25	@ 3.50

Bagging

Prices to Mill F. o. b. N. Y.

Cunny No. 1—		
Foreign	1.30	@ 1.40
Domestic	1.20	@ 1.30
Wool, Tares, light	1.30	@ 1.40
Wool, Tares, heavy	1.40	@ 1.50
Bright Bagging	1.10	@ 1.20
Sound Bagging	.90	@ 1.00
Manila Rope—		
Forein	6.25	@ 6.50
Domestic	6.50	@ 6.75
New Bu. Cut	2.15	@ 2.25
Hessian Juts Threads—		
Foreign	2.00	@ 2.25
Domestic	2.00	@ 2.10

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.30	@ .38
No. 2	.29	@ .31
No. 3	.34	@ .36
India, No. 6 basis—		
Light	.17	@ .18
Dark	.16	@ .17
B. C., 18 basis	.41	@ .42
A. B. Italian, 18 Basis	.51	@ .61
Finished Jute—		
Dark, 18 basis	.29	@ .30
Light, 18 basis	.26	@ .27
Jute Wrapping, 3-6 Ply—		
No. 1	.20	@ .23
No. 2	.18	@ .20
Tube Rope—		
4-ply and larger	.15	@ .17
Fine Tube Yarn—		
5-ply and larger	.19	@ .21
4-ply	.20	@ .22
3-ply	.20	@ .22
Unfinished India—		
Basis	.16	@ .17
Paper Makers' Twine		
Balls	.09	@ .11
Box Twine, 2-3 ply	.14	@ .15
Jute Rope	.15	@ .16
Amer. Hemp, 6	.30	@ .32
Sisal Hay Rope—		
No. 1 Basis	.14	@ .16
No. 2 Basis	.10	@ .12
Sisal Lath Yarn—		
No. 1	.14	@ .15
No. 2	.11	@ .13
Manila Rope	.18	@ .19

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	4.00	@ 4.10
Hard, White, No. 2	3.15	@ 3.25
Soft, White, No. 1	3.10	@ 3.30
Flat Stock—		
Stitches	1.70	@ 1.80
Over Issue Mag.	1.70	@ 1.80
Solid Flat Book	1.50	@ 1.60
Crumbled No. 1	1.25	@ 1.35
Solid Book Ledger	2.15	@ 2.25
Ledger Stock	1.90	@ 2.05
New B. B. Chips	.65	@ .80
Manilas—		
New Env. Cut	2.45	@ 2.55
New Cut No. 1	1.75	@ 2.00
Extra No. 1 old	1.30	@ 1.40
Print	1.10	@ 1.25
Container Board	.90	@ 1.00
Bogus Wrapper	.90	@ 1.00
Old Krafts Machine compressed bales	2.15	@ 2.25
News—		
No. 1 White News	2.15	@ 2.25
Strictly Overissue	1.15	@ 1.25
Strictly Folded	.85	@ .95
No. 1 Mixed Paper	.65	@ .75
Common Paper	.45	@ .55

CHICAGO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

F. o. b. Mill		
All Rag Bond	35	@ 40
No. 1 Rag Bond	30	@ 35
No. 2 Rag Bond	14	@ 25
Water Marked Sulphite	9	@ 12
Sulphite Bond	7½	@ 10¾
Sulphite Ledger	9½	@ 12
Superfine Writing	18	@ 24
No. 1 Fine Writing	14	@ 18
No. 2 Fine Writing	12	@ 14
No. 3 Fine Writing	9	@ 12
No. 1 M. F. Book	5¾	@ 7½
No. 1 S. & S. C. Book	6¼	@ 7¾
Coated Book	8	@ 10
Coated Label	8	@ 10
News—Rolls, mill	3¾	@ 4½
News—Sheets, mill	4¼	@ 4¾
No. 1 Manila	5	@ 6
No. 1 Fibre	5¼	@ 5¾
No. 22 Manila	4¼	@ 5
Butchers' Manila	4½	@
No. 1 Kraft	6	@ 6¼
No. 2 Kraft	5½	@ 6
Wood Tag Boards	4½	@ 6
Screenings	2¾	@ 3
Boards, per ton—		
Plain Chip	$40.00	@42.50
Solid news	45.00	@50.00
Manila Liner Chip	57.00	@60.00
Container Lined—		
85 Test	60.00	@65.00
100 Test	65.00	@70.00

Old Papers

F. o. b. Chicago

Shavings—		
No. 1 Hard White	3.70	@ 3.80
No. 1 Soft Shav.	3.15	@ 3.30
No. 1 Mixed	1.05	@ 1.15
No. 2 Mixed	1.00	@ 1.10
White Envel. Cuttings	3.80	@ 3.90
Ledgers and Writings	1.90	@ —
Solid Books	1.80	@ —
No. 1 Books, Light	1.90	@ —
Blanks	2.40	@ 2.50
Ex. No. 1 Manila	2.35	@ 2.45
Manila Envelope Cuttings	2.50	@ 2.60
No. 1 Manilas	1.60	@ —
Folded News (over issue)	1.30	@ —
Old Newspaper	1.20	@ —
Mixed Papers	1.10	@ —
Straw Clippings	1.20	@ —
Binders' Clippings	1.10	@ —
Kraft	2.50	@ —
New Kraft Cuts	2.65	@ —
Roofing Stock, f. o. b. Chicago, Net Cash—		
No. 1	42.00	@ —
No. 2	40.00	@ —
No. 3	38.00	@ —
No. 4	38.00	@ —

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.10	@ .60
Ledgers	.15	@ .40
Writings—		
Superfine	.15	@ .20
Extra fine	.12	@ .22
Fine	.20	@ .30
Fine, No. 2	.20	@ .25
Fine, No. 3	.15	@ .20
Book, M. F.	.06	@ .11
Book, S. S. & C.	.08	@ .15
Book, Coated	.08	@ .15
Coated Lithograph	.10	@ .15
Label	.08	@ .15
News	.05	@ .07
No. 1 Jute Manila	.12	@ .13
Manila Sul., No. 1	.08	@ .10
Manila No. 2	.07½	@ .08
No. 2 Kraft	—	@ .10
No. 1 Kraft	—	@ .11
Common Bogus	.02½	@ .03
Straw Board	75.00	@85.00
News Board	65.00	@70.00
Chip Board	62.50	@67.00
Wood Pulp Board	1.25	@ 1.50

(Carload Lots)

Binder Boards—		
Per ton	75.00	@80.00
Carload lots	75.00	@80.00
Tarred Felts—		
Regular	48.00	@50.00
Slaters	54.00	@56.00
Best Tarred, 1-ply (per roll)	1.35	@ 1.90
Best Tarred, 2-ply (per roll)	1.00	@ 1.15
Best Tarred, 3-ply	1.50	@ 1.65

Bagging

F. o. b. Phila.

Gunny No. 1—		
Foreign	1.25	@ —
Domestic	1.20	@ 1.25
Manila Rope	5.00	@ 6.00
Sisal Rope	.75	@ .80
Mixed Rope	.75	@ .80
Scrap Burlaps	1.00	@ 1.25
Wool Tares, heavy	2.50	@ 2.75
Mixed Strings	.75	@ .80
No. 1, New Lt. Burlap	1.75	@ 2.00
New Burlap Cuttings	1.75	@ 2.10

Old Papers

F. o. b. Phila.

Shavings—		
No. 1, Hard White	4.25	@ 4.40
No. 2, Hard White	3.50	@ 3.75
No. 1 Soft White	3.25	@ 3.50
No. 2 Soft White	2.75	@ 2.90

(Continued on page 74)

Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING FEBRUARY, 9, 1924

SUMMARY

News print.....852 rolls
Printing paper.....267 rolls, 243 cs.
Hangings.....14 bls.
Wall paper.....1,495 bls., 1 cs.
Filter paper.....4 cs.
Packing paper.....601 pgs.
Wrapping paper, 40 bls., 1,479 rolls, 5,988 pgs., 6 cs.
Kraft paper.....638 bls., 537 rolls
Drawing paper.....1 cs.
Cigarette paper.....70 cs.
Tissue paper.....10 cs.
Parchment paper.....14 cs.
Litho paper.....20 cs.
Photo paper.....1 cs.
Colored paper.....33 bls., 11 cs.
Copy paper.....24 cs.
Metal coated paper.....6 cs.
Miscellaneous paper.....243 cs.

CIGARETTE PAPER

P. J. Schweitzer, Providence, Marseilles, 53 cs.
Liggett & Myers Tobacco Co., Independence Hall, Havre, 13 cs.
J. V. Lago, Masanielle, Alicante, 4 cs.

WALL PAPER

F. J. Emmerich, Tyrrhenia, Liverpool, 7 bls.
F. J. Emmerich, Minnekahda, Hamburg, 3 bls.
F. J. Emmerich, Mt. Carroll, Hamburg, 67 bls.
F. J. Emmerich, by same, 1 cs.
National City Bank, Minnekahda, Hamburg, 1,418 bls.

PAPER HANGINGS

W. H. S. Lloyd & Co., Scythian, London, 14 bls.

PRINTING PAPER

Redden & Martin, Scythian, London, 32 rolls.
B. T. Drakenfeld Co., Tyrrhenia, Liverpool, 25 cs.
J. H. Scott Paper Co., Minnekahda, Hamburg, 96 rolls.
W. Hartmann & Co., by same, 10 rolls.
Perkins-Goodwin Co., Ala, Antwerp, 67 cs.
Perry, Ryer & Co., Assyria, Glasgow, 45 cs.
Maurice O'Meara Co., Mt. Carroll, Hamburg, 23 cs.
Chemical National Bank, by same, 83 cs.
Chemical National Bank, by same, 72 rolls.
J. H. Scott Paper Co., by same, 57 rolls.

NEWS PRINT

W. Hartmann & Co., Mt. Carroll, Hamburg, 57 rolls.
International Acceptance Bank, by same, 222 rolls.
Chemical National Bank, Minnekahda, Hamburg, 385 rolls.
M. Gottesman & Co., Inc., Oscar II, Copenhagen, 188 rolls.

PHOTO PAPER

J. J. Gavin & Co., President Garfield, London, 1 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Vellania, London, 4 cs.

COPY PAPER

H. C. Davison, Havana Maru, Kobe, 11 cs.
Iwai & Co., Tak. Maru, Kobe, 2 cs.
R. F. Downing & Co., Inc., by same, 11 cs.

DRAWING PAPER

Keuffel & Esser, Doric, Liverpool, 1 cs.

TISSUE PAPER

Meadows, Nye & Co., Doric, Liverpool, 8 cs.
H. Reeve Angel & Co., Inc., Tak. Maru, Kobe, 2 cs.

LITHO PAPER

Ault & Wiborg, Tak. Maru, Canton, 20 cs.

PARCHMENT PAPER

F. C. Strype, Dorelian, Antwerp, 14 cs.

COLORED PAPER

C. W. Williams, Dorelian, Antwerp, 11 cs.
W. Hartmann & Co., Minnekahda, Hamburg, 33 bls.

METAL COATED PAPER

Bank of the Manhattan Co., Minnekahda, Hamburg, 6 cs.

KRAFT PAPER

Maurice O'Meara Co., Minnekahda, Hamburg, 506 bls.
Maurice O'Meara Co., Mt. Carroll, Hamburg, 537 rolls.
Maurice O'Meara Co., by same, 132 bls.

PACKING PAPER

J. P. Heffernan Paper Co., Mt. Carroll, Hamburg, 601 pgs.

WRAPPING PAPER

J. P. Heffernan Paper Co., Mt. Carroll, Hamburg, 40 bls.
J. P. Heffernan, by same, 671 rolls.
Wilkinson Bros & Co., Inc., by same, 162 rolls.
C. K. MacAlpine & Co., by same, 5,988 pgs.
Chase National Bank, by same, 646 rolls.
Seantis, Inc., by same, 5 cs.
F. C. Strype, Dorelian, Antwerp, 4 cs.

PAPER

P. C. Zuhlke, Dorelian, Antwerp, 232 cs.
P. H. Petry & Co., Mt. Carroll, Hamburg, 4 cs.
Chemical National Bank, Minnekahda, Hamburg, 4 cs.
G. W. Sheldon & Co., President Garfield, London, 3 cs.

BAGS, BAGGINGS, ETC.

L. H. Abenheimer, Minnekahda, Hamburg, 63 bls. rags.
E. W. Dutton, Inc., Independence Hall, Havre, 71 bls. rags.
Castle & Overton, Independence Hall, Dunkirk, 76 bls. rags.
Maurice O'Meara Co., Ala, Antwerp, 183 bls. rags.
American Express Co., Assyria, Glasgow, 49 bls. rags.
Brown Bros. & Co., by same, 111 bls. rags.
Leshner Paper Stock Co., Carlier, Antwerp, 22 bls. rags.
W. Schall & Co., by same, 161 bls. rags.

OLD ROPE

Castle & Overton, Oscar II, Copenhagen, 35 coils.
Brown Bros. & Co., by same, 93 coils.
Brown Bros. & Co., Masaniello, Marseilles, 235 coils.
Brown Bros. & Co., Carlier, Antwerp, 95 coils.

WOOD PULP

Lagerloef Trading Company., Westfalen, 2,526 bls. wood pulp.
J. Anderson & Co., Oscar II, Copenhagen, 600 bls. dry sulphite pulp.
Johaneson, Wales & Sparre, Inc., Bremerton, Sundsvall, 2,500 bls. sulphite pulp.

PHILADELPHIA IMPORTS

WEEK ENDING FEBRUARY 9, 1924

Lagerloef Trading Company, Eastern Coast, 1,696 bls. wood pulp.
Sol Friedman, Ala, Antwerp, 61 bls. rags.
D. J. Murphy, by same, 414 bls. rags.
Philadelphia National Bank, by same, 102 bls. cotton waste.
Blaine & Co., by same, 52 bls. cotton waste.
E. J. Keller Co., Inc., by same, 80 bls. rags.
E. J. Keller Co., Inc., by same, 88 bls. old rope.
Johaneson, Wales & Sparre, Inc., Berk, Sundsvall, 3,250 bls. sulphite.

BALTIMORE IMPORTS

WEEK ENDING FEBRUARY 9, 1924

A. Brown & Sons, Independence Hall, Dunkirk, 557 bls. rags.
Wood Pulp Trading Co., Ltd., Sturcholm, Gothenburg, 1,750 bls. dry kraft pulp.

BOSTON IMPORTS

WEEK ENDING FEBRUARY 9, 1924

Shawmut Corp., Naperian, Antwerp, 569 reels paper.
W. Hartmann & Co., by same, 147 reels kraft paper.
Chemical National Bank, by same, 151 reels wrapping paper.
Train, Smith & Co., Nitonian, Manchester, 236 bls. rags.
E. Butterworth & Co., Inc., by same, 46 bls. waste paper.
E. Butterworth & Co., Inc., by same, 46 bls. bagging.
Train, Smith & Co., Mississippi, London, 163 bls. waste paper.
G. M. Granes & Co., by same, 37 bls. rags.
Crane Co., by same, 219 bls. rags.
G. W. Wheelwright Paper Co., Scythian, Liverpool, 198 bls. waste paper.
Baring Bros. & Co., Ltd., by same, 55 bls. waste paper.
Brown Bros. & Co., by same, 278 coils old rope.
L. H. Abenheimer, Poland Corunna, 48 bls. old rope.
International Purchasing Co., Mississippi, London, 366 coils old rope.
Ashworth, Speakman & Co., Nitonian, Liverpool, 138 bags hide cuttings.
E. Butterworth & Co., by same, 157 bags hide cuttings.
Bulkley, Dunton & Co., Naperian, Antwerp, 2,101 bls. wood pulp.
Johaneson, Wales & Sparre, Inc., Maridal, Frano, 1,500 bls. sulphite pulp.

NEW ORLEANS IMPORTS

WEEK ENDING FEBRUARY 9, 1924

Lagerloef Trading Company, West Munham, 2,055 bls. wood pulp.

NORFOLK IMPORTS

WEEK ENDING FEBRUARY 9, 1924

Lagerloef Trading Company, St. Anthony, 13,830 bls. wood pulp; 723 rolls wood pulpboard.

New York Office
280 Broadway

Dayton Office

Chicago Office
10 So. La Salle St.

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LOCKWOOD TRADE JOURNAL CO.

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Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, FEBRUARY 13, 1924.

The chemical market has continued to show improvement during the past week with prices growing firmer at their present level although there seem to be indications that they are going to rise before many more days pass. The stronger chemicals appear to be in particularly good condition, but the demand is increasing, slowly but surely, throughout the entire market. Dealers are getting in good supplies in anticipation of the return of good business and an optimistic feeling pervades the entire field.

BLEACHING POWDER.—Bleach has remained practically unchanged during the past several days, with the demand still in fair condition and prices the same. Quotations have shown a tendency to great firmness and it is now at 1.50 to 1.65 cents a pound.

CAUSTIC SODA.—The call for caustic soda continues to be about the same as it has been since the beginning of the new year. There is no sign of any falling off but on the other hand dealers report that it has not increased to quite the extent that they had hoped it would by this time. The price remains firm at 3.10 cents a pound on a flat basis at the works.

CASEIN.—While casein continues to lag behind some of the stronger chemicals, the demand for it is still at about the same level and it has recovered considerably from its precarious condition of a few weeks ago. The price is a trifle lower on the high range being at from 13 to 15 cents a pound.

CHINA CLAY.—China clay is still in fair demand in both the imported and domestic grades. While the amount that is coming in from Europe has not increased there seems to be buying enough to take up all that this country offers. In the domestic grades there is also good business and dealers say that the price is from $12 to $15 a ton for the domestic grades and $16 to $20 a ton for the imported grades.

CHLORINE.—Chlorine has not continued its upward rise of a few weeks ago but it is very firm at its present level with a slow but steady demand taking up most of the production. Paper manufacturers however, seem to be showing more interest in it and many inquiries are coming in to the dealers and manufacturers. The price is 3.50 to 4.50 cents a pound in tanks.

ROSIN.—In the home grades the call for naval stores has improved and the price has gone up gradually. The paper industry seems to be taking more than it did a week ago and dealers in rosin report that the price is firm at from $5.90 to $6.00 in 280 pound barrels.

SALTCAKE.—Saltcake on the other hand is moving rather slowly. This does not cause as much distress as it might if it were not impossible for manufacturers to store this product indefinitely without much loss of value. They are storing it now waiting for the market to get in better shape and consequently little is finding its way in the open trading. With this check on the supply the price is quite firm at from $20 to $23 a ton.

SODA ASH.—Soda ash is selling fairly well like the other chemicals to which it is closely related. There has been no change in the price and trading on the open market while a little slower still continues in fairly good volume. The price remains at 1.38 cents a pound on a flat basis.

SULPHATE OF ALUMINA.—Alumina is not quite as brisk as it was at the opening of the year but at the same time the demand is not so slow as to produce any real slump. Paper manufacturers are showing interest even though they may not buy in great quantities. The price is a trifle lower being at 1.30 to 1.40 cents a pound on the commercial grade and 2.10 to 2.25 on iron free.

Fire at Bayless Plant

AUSTIN, Pa., February 4, 1924.—Fire last Monday caused a loss of several thousand dollars at the paper mill of the Bayless Manufacturing Corporation. The fire originated in the digester building and it is surmised, was due to a hot-box on the upper screen.

Market Quotations

(Continued from page 71)

No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.25	@	2.50
Writing Paper	2.00	@	2.25
No. 1 Books, heavy	2.00	@	2.25
No. 2 Books, light	1.40	@	1.50
No. 1 New Manila	2.75	@	3.00
No. 1 Old Manila	1.75	@	2.00
Container Manila	1.25	@	1.50
Old Kraft	2.25	@	2.50
Overissue News	1.25	@	1.35
Old Newspaper	.90	@	1.00
No. 1 Mixed Paper	1.00	@	1.10
Common Paper	.80	@	.90
Straw Board, Chip	1.00	@	1.10
Binders Bd., Chip	1.00	@	1.10

Domestic Rags—New.
Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.12	@	.12¼
New White, No. 2	.07	@	—
Silesias, No. 1	.07¼	@	.07½
New Unbleached	.10	@	.11
Washables	.04½	@	—
Fancy	.05¼	@	.05½
Cottons—according to grades—			
Blue Overall	.05½	@	.05¾
New Blue	.02¼	@	.02¾
New Black Soft	.05¾	@	.06½
New Light Seconds	.02¾	@	.02¾
Khaki Cuttings	.11	@	.04½
Corduroy	.03½	@	.04
New Canvas	.08¼	@	.08¾
New Black Mixed	.04	@	—
Old White, No. 1—			
Repacked	.06	@	.06½
Miscellaneous	.04½	@	.04¾
White, No. 2—			
Repacked	.03½	@	.04
Miscellaneous	.03	@	.03¼
Thirds and Blues—			
Repacked	2.50	@	2.75
Miscellaneous	2.15	@	2.35
Black Stockings	2.75	@	3.00
Roofing Stock—			
No. 1	1.35	@	1.40
No. 2	1.25	@	1.30
No. 3	.75	@	.90
No. 4	1.15	@	1.20
No. 5A	1.10	@	—
B			nominal
C			nominal

BOSTON

Paper

Bonds	.09	@	.63
Ledgers	.09	@	.55
Writings	.08¼	@	.42
Superfine	.16	@	.26
Fine	.15	@	.18
Books, S. & S. C.	.07¼	@	.12
Books, M. F.	.07¼	@	.09½
Books, coated	.09	@	.15
Label	.09	@	.13
News, sheets	4.75	@	6.00
News, rolls	4.50	@	5.75
Manilas—			
No. 1 Manila	6.00	@	7.00
No. 1 Fiber	.06½	@	.07
No. 1 Jute	9.00	@	10.50
Kraft Wrapping	.07	@	—
Common Bogus	3.50	@	3.85

Boards

(Per Ton Destination)

Chip	$45.00	@	47.50
News, Vat Lined	47.50	@	50.00
Wood, Vat Lined	55.00	@	60.00
Filled News Board	$50.00		
Solid News Board.			
No. 4 Finish	65.00	@	70.00
S. Manila Chip	62.50	@	70.00
Pat. Coated News	82.50	@	90.00

Old Papers

Mixed paper	.70	@	.75
Folded news	.90	@	.95
Soft white shavings	2.90	@	3.10
Hard white shavings	3.75	@	4.00
Kraft Paper	1.95	@	2.10
Ledger and letter	2.15	@	2.35
No. 1 books and magazines	1.60	@	1.70
Manila paper No. 1	1.75	@	1.80
Solid ledgers	2.50	@	2.75
No. 1 roofing rags	2.40	@	2.50
No. 2 roofing rags	2.30	@	2.40
No. 3 gunny bagging	.95	@	1.05
No. 4 Brussels and hard back carpets	1.45	@	1.50
No. 5 roofing rags			
A's	2.10	@	2.25
B's	—	@	—
C's	—	@	—
No. 6 City dump rags	—	@	—
Manila rope, domestic	.06	@	.06½
Mixed strings	1.10	@	1.20
Jute strings	1.30	@	1.40

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted	.12	@	.13½
Dark Tinted	.13½	@	.15
Ledgers (sulphite)	—	@	.13
Writing	.09½	@	.12
News, f. o. b. Mills—			
Rolls (carloads)	3.75	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	9.00	@	—
No. 2 M. F. (carloads)	8.00	@	—
No. 3 M. F. (carloads)	7.50	@	—
No. 1 S. C. (carloads)	9.50	@	—
No. 2 S. C. (carloads)	8.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rap	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	$35.00	@	38.00
Sulphite easy bleaching	55.00	@	60.00
Sulphite news grade	50.00	@	55.00
Sulphite, bleached	80.00	@	—
Sulphate	—	@	65.00

Old Waste Papers

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.65	@	3.80
Soft White Book shavings	3.20	@	3.30
White Blk. News	2.15	@	2.20
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.60	@	—
Light and Crumpled Book Stock	1.45	@	—
Ledgers and Writings	2.00	@	—
Solid Ledgers	2.00	@	—
Manilas—			
New Manila Cut	—	@	2.15
Printed Manilas	1.55	@	—
Kraft	2.05	@	—
News and Scrap—			
Strictly Overissue	.90	@	—
Folded News	.90	@	—
No. 1 Mixed Papers	—	@	.75

Domestic Rags—
Price to mills, f. o. b. Toronto

	Per lb.		
No. 1 White shirt cuttings	.12¾	@	.13
No. 2 White shirt cuttings	.06	@	.06½
Fancy shirt cuttings	.06	@	.06¼
No. 1 Old Whites	.04½	@	—
Third and blues	.02½	@	.02¾
	Per cwt.		
Black stockings	.03	@	—
Roofing stock:			
No. 1	—	@	—
No. 2	—	@	—
Manila rope	.06¼	@	.06½
No. 2	1.55	@	—
Gunny Bagging	.01¾	@	—